NATIONAL PETROLEUM NEWS

Vol. XVIII Cleveland, Ohio, May 19, 1926 No. 20

Strong Kerosene Market Has Come to Stay, Study of Causes Indicates

By J. C. Chatfield
N. P. N. Staff Writer

TULSA, May 17.

DURING the past four and a half months the price of kerosene at Mid-Continent refineries has almost doubled. At the opening of the year 41-43 water white kerosene was selling at 5½ cents per gallon. Today the market is 10 to 10¼ cents.

The rapid advance in price has not been confined to the Mid-Continent field. Prices are higher in California, on the Gulf coast and in the east. In these fields, though, the advance has not been quite as sharp as in Group 3 and surrounding refining territory.

About three years ago naphtha was selling in the Mid-Continent at from 2 to 3 cents below 56-58, 450 end point gasoline. Suddenly the price advanced to within a quarter to a half cent of gasoline. It has maintained that relationship since. The advance in naphtha three years ago is similar to that just made by kerosene, both in the rapidity of the readjustment with reference to gasoline and in the underlying cause. In both cases the readjustment was made within a few weeks and in both cases improved refining practise was an important cause.

For a number of years refiners have maintained that kerosene is as valuable a product of petroleum as gasoline. They have cited the fact that it actually costs more to produce a good grade of kerosene than gasoline, and pointed out that the product has a high intrinsic worth.

Production Decreasing

THE present high prices for kerosene are the result of a marked increase in domestic consumption which has coincided with a decrease in refinery production. Kerosene consumption in the United States increased nearly 10 per cent during 1925 as compared with the previous year, while the total production of U. S. refineries was less than in 1924 by nearly 11,000,000 gallons. The result has been a steady withdrawal from refinery stocks which began in midsummer last year.

Within the past few months the law of supply and demand has done what no refiner or group of refiners could have done, raised the price of kerosene to a level which more truly represents its worth as compared with gasoline. The remarkable feature of the situation is that the price of kerosene did not reach its present level six months ago. Apparently the only answer is that refiners were so much interested in the gasoline situation that they permitted their stocks of kerosene to be depleted without taking advantage of the opportunity knocking at their doors.

Following the war the inability of the farmer to buy goods resulted in a steady decrease in the domestic demand for kerosene. Figures of the U. S. Bureau of Mines show that total domestic consumption of kerosene in 1919 was 3.6 per cent less than in 1918. In 1920 domestic consumption was 0.3 per cent less than in 1919 and the following year there was another drop of 10.7. Total domestic consumption of kerosene in 1921 was only 1,240,000,000 gallons as compared with 1,446,548,000 gallons in 1918.

Demand Increasing

IN 1922 kerosene demand took a sharp jump upwards which brought it back to 1,463,000,000 gallons, a little more than in 1918. From that time forward there has been a steady enlargement of demand, reflecting more settled conditions among consumers. In 1923 total domestic demand as shown by the Bureau of Mines was 1,492,000,000 gallons, an increase of 2 per cent over the

Table No. 1. Kerosene consumption in 12 representative states, as shown by inspection reports compiled by the American Petroleum Institute. Figures in gallons.

	1923	1924	1925
Arkansas	13,134,000	16,704,000	17,917,000
Colorado	9,302,000	9,638,000	9,317,000
Georgia	23,698,000	23,147,000	21,950,000
Florida	17,306,000	20,215,000	25,648,000
Nebraska	27,567,000	24,758,000	29,230,000
South Carolina	14,436,000	16,890,000	15,192,000
North Dakota	17,182,000	15,601,000	18,831,000
Kansas	47,004,000	49,497,000	49,115,000
Oklahoma	28,931,000	31,727,000	32,617,000
South Dakota	16,494,000	16,958,000	18,473,000
Michigan	57,177,000	57,197,000	57,890,000
Minnesota	46,667,000	49,980,000	57,538,000
Total	318,898,000	332,294,000	353,718,000
Increase over previous year		4.2%	6.5%

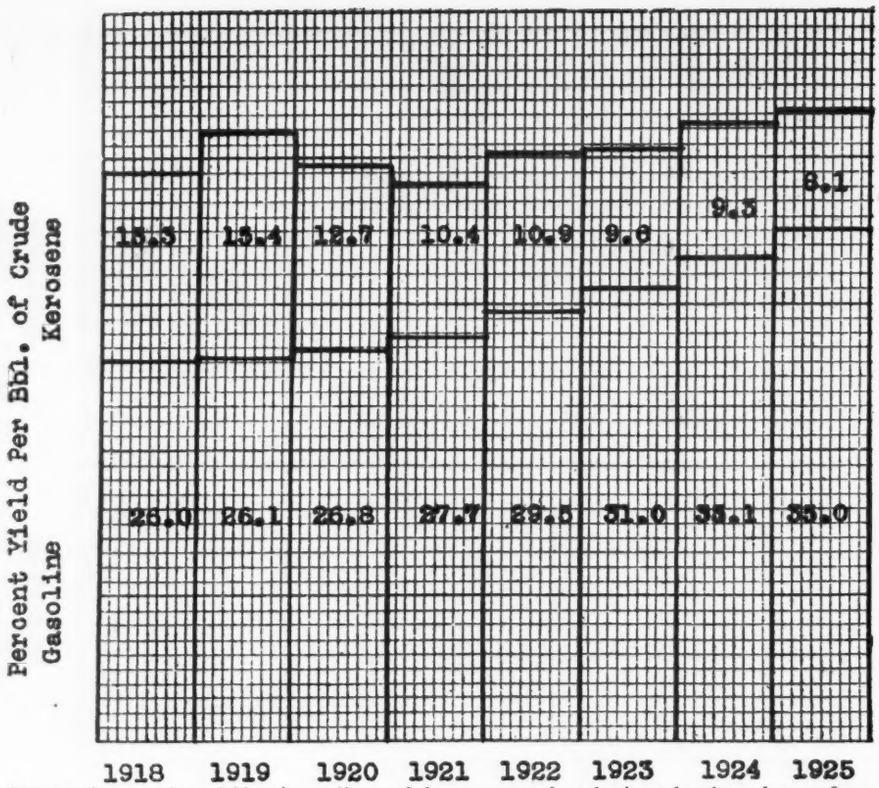

Fig. 1. Comparative yields of gasoline and kerosene per barrel of crude charged to refinery stills. Based on figures of the U. S. Bureau of Mines.

previous year. The consumption was increased 3.3 per cent in 1924 to a total of 1,542,000,000 gallons. The demand from domestic sources jumped up 9.9 per cent in 1925 to 1,695,000,000 gallons.

Reports of state oil inspectors from various parts of the country show how consumption has been growing during the past three years. Table No. 1 shows the number of gallons of kerosene inspected the past three years in 12 representative states. In some states such as Colorado it will be observed that there has been virtually no change in consumption. The opposite extreme is the case of Florida which has been passing through a period of intensive development. Kerosene inspection in Florida totaled 17,306,000 gallons in 1923 and 25,648,000 gallons in 1925. The Dakotas have shown a nice increase in consumption and Minnesota has had a remarkable record, jumping from 46,667,000 gallons in 1923 to 57,538,000 gallons in 1925, an increase of 11,000,000 gallons.

Total inspections in the 12 states from which figures were gathered by the American Petroleum Institute increased 4.2 per cent in 1924 and 6.5 per cent in 1925.

Farmers have been able to obtain money more freely the past two years and have been buying more tractors, and their consumption of kerosene has more than offset the loss due to the smaller number of kerosene lamps used on the modern farm.

Another important fact in consumption has been the use of kerosene cooking stoves in small towns, cities not supplied with gas and on the farm. Modern housewives demand gas if it is available. If not, they want the next best thing, kerosene stoves, which will not heat up the kitchen on warm days like the old wood or coal ranges. In small towns the sale of kerosene burners for water heaters is an important item. Kerosene is used in home heating installations in some cases. Certain householders have used kerosene in preference to distillate in the belief they were getting their money's worth out of the extra expense through lack of annoyance with their burners.

Constantly Narrowing Yield

IN the past eight years refiners of the United States have increased their charges of crude to stills 126.9 per cent to keep pace with the demand for petroleum products. In the same period they have increased their production of gasoline 204.9 per cent, while output of kerosene has been increased only 37.5 per cent. Gasoline production of U. S. refineries in 1925 was 7,315,814,000 gallons greater than in 1918 while kerosene production in 1925 was only 684,774,000 gallons greater than in 1918.

Fig. 1 is a graphical chart showing how the yield of gasoline out of a barrel of crude has increased from year to year, while the yield of kerosene has steadily decreased. In 1918 the yield of kerosene was 13.3 per cent of the barrel of crude, while the yield of gasoline was 26 per cent. In 1919, the year of kerosene blends, the yield of kerosene jumped up to 15.4 per cent. Since that time, however, the yield has de-

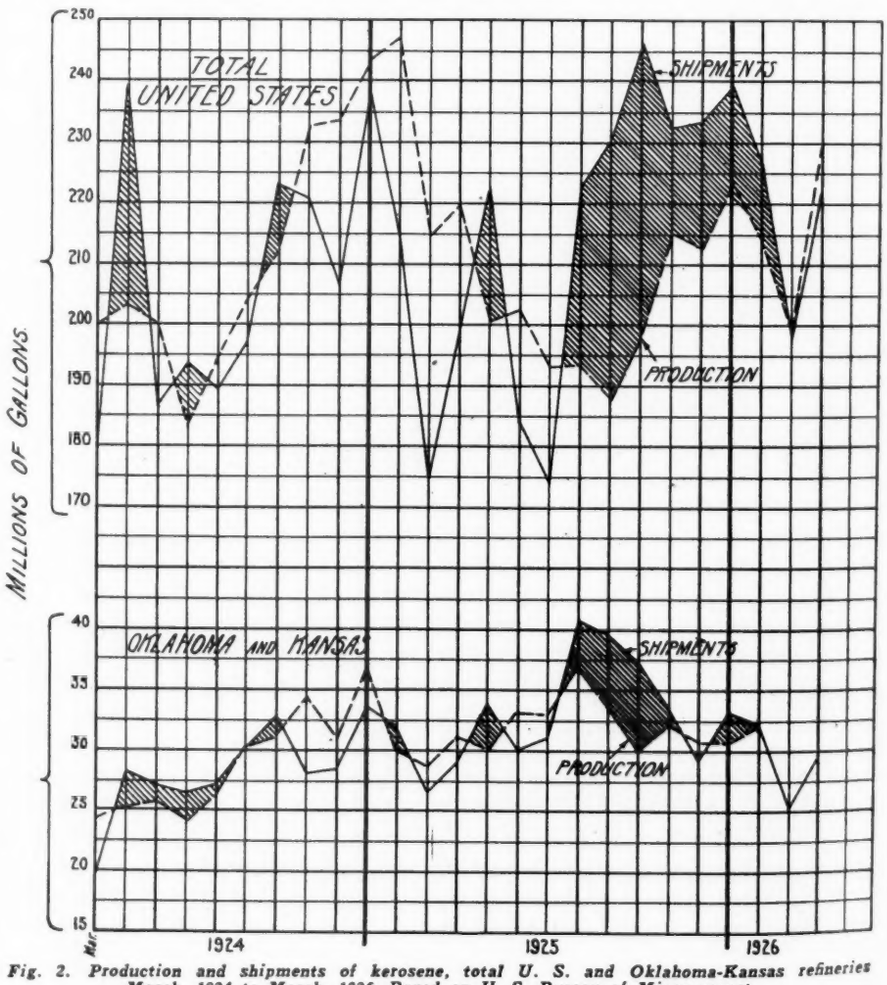

Fig. 2. Production and shipments of kerosene, total U. S. and Oklahoma-Kansas refineries March, 1924 to March, 1926. Based on U. S. Bureau of Mines report.

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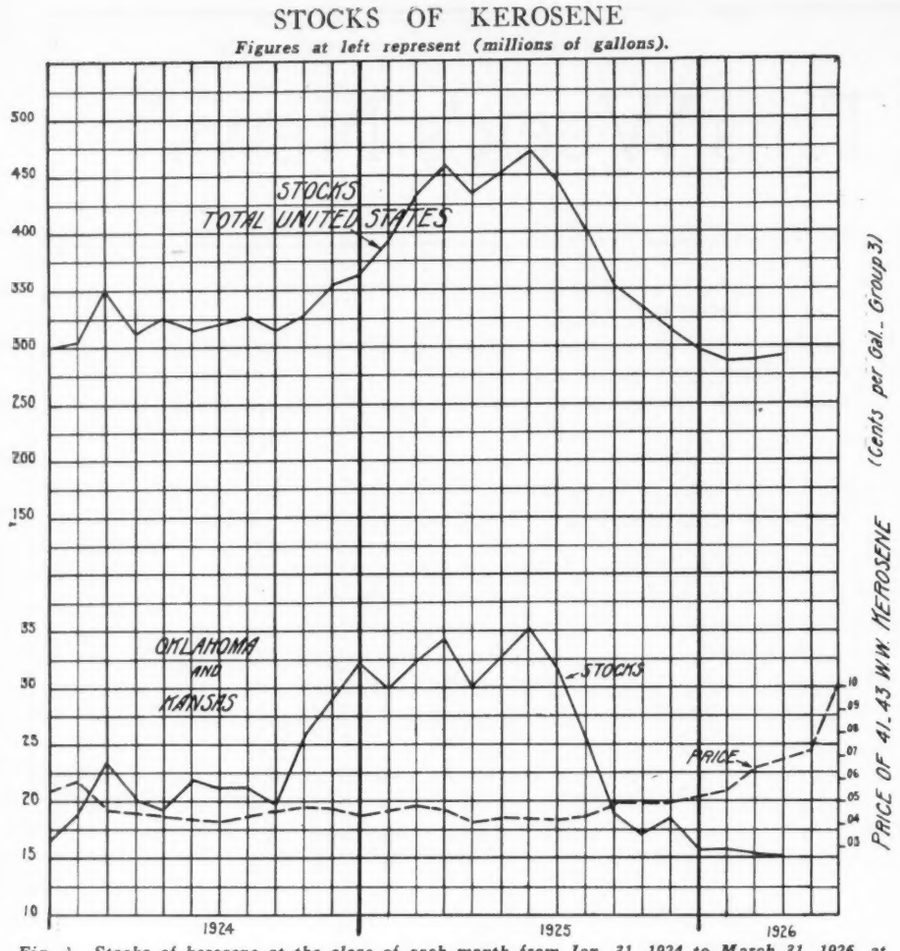


Fig. 2. Stocks of kerosene at the close of each month from Jan. 31, 1924 to March 31, 1926, at all U. S. refineries and at Oklahoma and Kansas refineries with spot price of 41-43 water white kerosene at Group 3 refineries.

clined every year until in 1925 it was down to 8.1 per cent of the crude.

It will be observed from a study of the chart that much of the increase in gasoline yield has been made at the expense of kerosene. The total yield of gasoline plus kerosene was 43.1 per cent in 1925 as compared with 39.3 per cent in 1918.

No Change in Operations

ONE important Oklahoma refiner stated that the present price of kerosene does not tempt him to change his system of operation to obtain a larger yield. This refiner skims off his straight-run gasoline as an initial operation. His next cut from the crude is a cracking stock composed of the normal skimming cuts of kerosene, stove distillate and gas oil.

This refiner's cracking plant is designed to handle all the cut between heavy fuel oil and gasoline which can be produced from his stills operated to normal capacity. His view is that the inclusion of kerosene in the cracking stock cut aids him in cracking. In addition the withdrawal of the kerosene would leave a portion of his cracking equipment idle. For those reasons he would not be inclined to produce kerosene even at 10 cents per gallon.

Even in skimming plants the yield of kerosene is not as great as formerly. Refiners have discovered that by close fractionation they are able to obtain a large percentage of relatively low boiling point material from the cut which was formerly all kerosene. This low boiling point material is being included in the gasoline without injuring its qualities for use as motor fuel.

Clipped on Both Ends

THE kerosene cut is being robbed from the bottom as well as from the top. In order to obtain a larger yield of stove distillate for home heating, refiners have been permitting some of their kerosene to remain in the distillate cut and have balanced the low flash material from the kerosene cut with the highest fractions of the gas oil cut.

Consumption of stove distillate has been increasing rapidly and is one reason for the increase in kerosene consumption as shown in reports of the U. S. Bureau of Mines. Thus far there is no standard practise in reporting distillate to the government. When this publication began separating distillate production and shipment figures from other commodities six months ago in its weekly compilations covering the operation of 124 refineries, it was found that some refiners had been reporting distillate under the head of kerosene while others had been reporting it as gas and fuel oil.

A study of kerosene figures, as well as distillate figures in the weekly National Petroleum News reports, shows that the entire increase has not been due to distillate. On Jan. 1, 1926, the 124 Mid-Continent refineries reported stocks of kerosene amounting to 10,544,870 gallons and stove distillate stocks of 14,934,744 gallons. The report for the week ending May 7, the latest available as this is written, shows kerosene stocks have been cut at the 124 plants to 5,682,577 gallons, a decrease of 46.1 per cent in five months. The same report shows that present stocks of stove distillate are 2,906,585 gallons, a reduction of 80.6 per cent.

Slight Increase In Yield

AN examination of yields during recent weeks does not show that advancing prices have tempted refiners as a whole to increase their production of either stove distillate or kerosene materially. The following table shows yields of kerosene and distillate for five scattered weeks during the past few months:

Week Ending	Yield Percentage of Kerosene	Stove Distillate
Jan. 1	4.87%	1.62%
Jan. 29	5.46	1.62
Feb. 26	4.54	1.61
Mar. 26	5.28	1.81
Apr. 30	5.30	1.33
May 7	5.41	1.30

One of the largest refiners in the Mid-Continent field has stated that the demands of his customers for kerosene has influenced him to increase his production slightly. This increased production has come about by leaving a portion of the highest boiling point fractions of the gasoline cut in kerosene. The result has been a more volatile gasoline produced at the plant as well as a larger kerosene yield.

This particular refiner has decided it is not economical to crack material which could be finished up as kerosene when burning oils are bringing as much as 10 cents per gallon. When kerosene was selling at from 4 to 5 cents per gallon and stove distillate was a half cent lower he found it economical either to leave the kerosene in the distillate rather than finish and treat it, or to run it to cracking stills.

One large refiner in Oklahoma is now blending part of his heavy naphtha with 38 gravity water white distillate to produce a larger cut of kerosene. By taking a part of his 11 cent naphtha from the gasoline cut and his 4 cent distillate, he is able profitably to produce a 10½ cent kerosene. This practice will result in slightly smaller yields of gasoline and stove distillate but a larger cut of kerosene.

Fig. 2 is a chart showing shipment and production of kerosene from all refineries in the United States and from Oklahoma and Kansas refineries for two years ending Mar. 31, 1926. The shaded portion of the chart represents the period during which shipments have

been in excess of production during the two years.

Consumption Peaks

IT will be observed from this chart that, during the past two years, the demand for kerosene reached its lowest point during May. The peak demand at refineries comes in September. In 1924 there was a peak of demand in April as well as in September, and the same situation is apparent in 1925. Thus far government figures are not available for April of 1926 but there was a sharp increase in refinery shipments in March as compared with February both in the Mid-Continent field and in the entire country.

The spring peak of demand for kerosene is lower than the fall peak. The spring peak is caused by spring plowing demand and for kerosene cooking stoves, incubator heaters and the like. The fall demand for plowing and threshing is augmented by home heating consumption and export shipments always are higher in the fall and early winter months. In 1925 the peak months for kerosene exports were October and March. The low points were February and May. In 1924 the peak export months were April and October and the low months January and March. It will be observed that the peaks coincide rather closely with those of total consumption.

Export Big Factor

UNLIKE gasoline, the export demand for kerosene is a factor of the utmost importance. In 1924 exports of 919,000,000 gallons represented 36.47 per cent of the total kerosene production of the country. In 1925 kerosene exports represented 35.06 per cent of the total production of United States refineries.

During the fall and winter of 1924 there was virtually no draft on kerosene stocks, as may be observed from Fig. 2. In 1925 the draft began in July both in the Mid-Continent and in the country as a whole and shipments have remained above production virtually all of the time since then.

The course of stocks may be seen more clearly by studying Fig. 3 which shows the amount of kerosene in reserve at all U. S. refineries and in Oklahoma and Kansas refineries for the past two years and three months. This chart shows that Oklahoma and Kansas plants have drawn on stocks every month since last June with the exception of November, while U. S. plants added slightly to stocks in March for the first time.

The price of 41-43 water white kerosene in Group 3 is plotted against the level of stocks in Oklahoma and Kansas in Fig. 3. The price reacted only very slightly to the tremendous drafts on stocks during July, August and September of 1925. Its first definite upward move toward its present level of over 10 cents per gallon came after refiners had cut their stocks in half and were faced with the spring peak of demand, with no adequate reserves with which to supply the demand.

Statistics Warrant Present Price Trends

By Warren C. Platt
Editor

UNDOUBTEDLY, one of the most important stories for the welfare—yes, the happiness too—of the oil refiner, particularly of the middle west in the history of the industry, is that appearing on preceding pages of this issue. This story shows that the present price of kerosene, which might properly be called high in comparison with past prices, has come to stay. It also shows that, had the industry been watching the statistical position of kerosene stocks as closely as it does that of gasoline, Mid-Continent refiners could have enjoyed many months ago a part of the recent 100 per cent increase in kerosene prices.

The story further suggests that even the very near future may hold much higher prices for gas oil and fuel oil for the Independent refiner. Seldom, if ever, in the history of the oil industry has there been a more striking example of the operation of the law of supply and demand in favor of the refiner. It is an illustration of how the sheer force of demand against a declining supply and without any effort by the refiner for higher prices pulled up the price of kerosene.

When the price of gasoline or crude oil has advanced in the past, it has generally followed much talk and expectation of an advance which may even have effected somewhat the time and extent of the advance. In the present case of kerosene, sheer economic laws alone have brought about the price advance. Mr. Chatfield points out in his story the demand for kerosene probably mostly for domestic heating and for the cut from which kerosene is made for use in cracking stills has steadily eaten into the production of kerosene so that stocks have been radically decreased. The best of it is that this decrease is not alone in Mid-Continent districts—where the refiner has been a sufferer from low prices on all products—but over the country generally, which lends further strength to the conclusion that can be drawn that the new adjustment has undoubtedly come for good,— at least so far as anyone is warranted in prophesying as to refining methods of the future.

The oil industry has had many critics and some have criticized the industry for not studying its own statistics. The present kerosene condition seems to show clearly that the industry has ignored statistics on everything except gasoline and crude.

Just consider what might have been the effect on market prices of kerosene had the industry been closely following the decline in stocks from their peak in June, 1925—a peak not only for Oklahoma and Kansas refiners but for total stocks of the United States. Just consider from a study of the charts with Mr. Chatfield's story, what might have been the effect on the price of kerosene had the refiner, in August and September of 1925 appreciated the tremendous drop in stocks of this commodity?

The chart shows that the enormous draft was most precipitate from the last of June to the first of September, and it further shows that, though the decline became apparent, it did not affect the price to amount to anything until the first of this year. Since that time, it has more than doubled the price prevailing for the last few years.

It is safe to assume that, at least to some extent, fuel oil and gas oil will follow kerosene. However, their advance will be retarded by the fact that their present users can only pay a limited price. If the price goes too high, the market for fuel oil will be restricted and fuel oil will go back on the open market. The same is true of gas oil. While the industry has had some experience with fuel oil, nevertheless it cannot set any definite figure for which any amount of that oil will be refused by present users and thrown on the open market. The price at which it will be refused depends, not only on the individual industries using it, but on the units of each industry using it. One unit may pay as high as $1.50 before going to coal, another, $1.75 or higher.

However, without doubt, the trend from now on—barring the discovery of a large field of cheap crude—will be decidely upwards for both gas oil and fuel oil also.

Restoration of Pressure in Osage To Be Argued at Washington

Staff Special

TULSA, May 17.

RESTORATION of pressure in order to stimulate oil production from wells has proved successful in a number of producing areas, particularly in the Eastern fields, and is now a subject of much interest in the fields of the southwest. The restoration of pressure is brought about through introduction into wells of air, gas or water.

Complications have arisen over the effect of the introduction of these agents upon natural gasoline plants and upon adjoining or nearby properties. This is particularly true in the Osage reservation, Okla., where the minerals are divided in ownership, one lessee owning the oil rights, another the gas rights, while a third interest is engaged in the manufacture of gasoline from natural gas.

Operators in the Osage have been conferring for the past two months, through the Osage Oil & Gas Lessees association as a forum, in an effort to define the rights of each class of lessees or operators where artificial expulsion agents are employed to increase oil production. It is apparently the concensus of opinion that the use of gas for this purpose would be the least likely to be injurious to gas lessees and natural gasoline manufacturers, but there is a fundamental difference of opinion as to whether the oil lessee or the gas lessee owns the residue gas from the gasoline plants.

Residue gas, being ordinarily the only gas available to the oil producer in large quantities on Osage leases, is generally used where gas is placed in the well under pressure as a stimulus to production. The oil lessee claims a right under the lease and regulations to utilize it for restoring pressure as an "operation" within the meaning of these instruments. The gas lessee is not prepared to concede this point. In any event, it is believed that the introduction of gas or any other substance should be done under the supervision of the Interior Department under its general power to supervise and regulate the development of the oil and gas resources of the Osage nation.

Conferences so far held have resulted in the appointment of representative steering committees by each group, who are endeavoring to iron out the difficulties, according to Harry H. Smith, secretary of the Osage Oil & Gas Lessees association. These committees, in conference with J. George Wright, superintendent of the Osage agency, have agreed tentatively to present the matter at a general hearing before the Secretary of the Interior at Washington on a date to be arranged by Mr. Wright, probably about June 21. This hearing will be for the purpose of discussing proposed regulations to govern pressure-restoring operations. It is anticipated, however, that the department cannot determine conclusively the fundamental legal question as to whether the oil lessee or the gas lessee is to entitled to the use of the residue gas. That question possibly will form the basis of a test suit in the courts. In the meantime, the three groups have technical committees at work to decide on details of the proposed regulations.

These technical committees are now working on subjects connected with the problem, such as the question of the proper number of key wells, the amount of gas to be introduced per well per day, and precautions to be taken to protect producing sands, all of which will be included in the proposed regulations. Development of this art of restoring pressure, as it may be worked out in the Osage, will be of interest to the industry generally, because the divided ownership in that area will compel careful attention to the matter of protecting the rights of everyone, including the natural gasoline manufacturer and the royalty owner.

Below are given names of the members of the steering committees selected by each of the three groups concerned in the discussion. It is from among these committees that representatives will be chosen to present the matter at Washington.

Steering Committees.

For the gas lessees:—R. L. Gordon, Indian Territory Illuminating Oil Co., Bartlesville, chairman; W. C. Franklin, Tidal Oil Co., Tulsa; Frank Long, Sand Springs Home, Sand Springs; H. L. Montgomery, Empire Gas & Fuel Co., Bartlesville; G. G. Shallenberger, Kay County Gas Co., Ponca City.

A NEW type of motor truck has been developed that bids fair to go far toward eliminating the railroad tank car for hauling gasoline for distances, say up to 200 miles, from the refinery to the bulk station.

Use of this truck has been found to save as much as 25 per cent on freight bills alone, along with other less obvious savings.

The truck itself is described and the manner in which it is operating to the advantage of the oil companies using it.

This is in a story to appear in the May 26 issue of National Petroleum News.

For the oil lessees:—Rush Greenslade, Gypsy Oil Co., Tulsa, chairman; William N. Davis, Phillips Petroleum Co., Bartlesville; Burt H. Collins, Echo Oil Co., Tulsa; George S. Rollin, Roxana Petroleum Corp., Tulsa; James A. Veasey, Carter Oil Co., Tulsa.

For the gasoline manufacturers:—John Kane, Phillips Petroleum Co., Bartlesville, chairman; S. S. Smith, Roxana Petroleum Corp., Tulsa; E. L. Peck, Empire Gasoline Co., Bartlesville; J. R. Freeman, Carter Oil Co., Tulsa; C. C. Herndon, Skelly Oil Co., Tulsa.

Oil Credit Men Meet Next Week in New York

NEW YORK, May 17.—Many oil credit men are expected to attend the petroleum group meeting of the National Association of Credit Men as a part of the convention of the association in the Commodore hotel here May 24 to 28.

The Interchange bureau as presented at the American Petroleum Institute meeting in Los Angeles will be shown as a working unit now in operation with one office in Tulsa. It is probable that after the meeting in New York, another office will be opened in some eastern city so that the clearings of the Interchange bureau will be available with less mailing time than between the East and Tulsa.

This Interchange bureau is operated by the national association for the benefit of sales organizations selling in tank car or carload lots, the idea being to give the seller the ledger experience of all sellers (without any names being mentioned) as to amount of purchases made by buyer, manner and promptness of payments. When this plan is completely worked out it will also furnish a financial statement from the buyer.

Panhandle's Best Well Makes 7,800 Barrels

TULSA, May 17.—The largest well yet brought in the Texas Panhandle field is the No. 3 Smith Ranch of the Canyon Oil Co., in Sec. 12 Block Y, Hutchinson county. This well started off flowing 375 barrels an hour in lime pay from 2773 to 2823 feet. In its first 24 hours after drilling in, the well flowed 7820 barrels and the remarkable features of its great output is that it is flowing natural without a shot.

The only Panhandle well comparing with this one in size was the Lennix Oil Co.'s well which started off at the rate of 5400 barrels daily after a 500-quart shot.

The new well is located in the southwest corner of Sec. 12 and is a north offset to the property of the Dixon Creek Oil Co., on a lease consisting of 40 acres. It is a half mile due north of the Lennix well.

Gas Association Registrations Point To Successful Meeting in Tulsa

By Telegraph
TULSA, May 17.

LED by 140 gas company executives and members of the Natural Gas Association of America, who arrived in Tulsa in a special train last night, approximately 500 gas men had registered at convention headquarters this evening, checking in for the twenty-first annual convention of the association.

Registration desks at headquarters of the Natural Gas Supply Men Incorporated, affiliated society with the Natural Gas Association, also were busy all day taking care of arrivals.

Headquarters are being maintained in the New York Building, on the grounds of the International Petroleum Exposition. The Texas building, the largest structure on the Exposition grounds, is being used for exhibits, and every booth is filled. A number of outdoor exhibits also were being placed in position on the grounds, most of them engines or machinery in motion.

Today was given over to registrations and committee meetings in preparation for the beginning of the convention tomorow. Tonight, the delegates will be guests of the supply men at a wrestling match for the world's championship, one thousand tickets being placed at the disposal of the visiting gas and supply men.

The supply mens' organization is also providing complimentary luncheons each day to all who have registered as visitors to the convention.

Directors Meet

DIRECTORS of the Natural Gas Association held their annual meeting this afternoon and will meet for their annual dinner this evening.

Program for Tuesday, first day of the convention, starts with an invocation by Rev. C. W. Kerr, of the first Presbyterian church, followed by an address of welcome by H. F. Newblock, mayor of Tulsa.

R. C. Sharp, vice president of the Oklahoma Natural Gas Co. will respond on behalf of the association. A. W. Leonard, vice president of the Oklahoma Natural, and president of the Natural Gas Association will then deliver his annual address.

William H. Thompson, Columbus, Ohio, secretary of the Ohio Gas and Oil Men's Association, will make a report for the committee on memorials, and Guy F. Batchelor, of Pittsburgh, general secretary of the gas association, will make an annual report.

E. O. Bennett of the United States Bureau of Mines, Bartlesville, will then read a paper entitled, "Natural Gas—Its Conservation and Significance to the Gas and Oil Operator."

A. W. Leonard
President, Natural Gas Association of America and Vice-president, Oklahoma Natural Gas Co.

AMENDMENTS to the tentative standard test method for determining gasoline content of casinghead gas were approved today at a general meeting of the technical and research committee of the Natural Gas Association of America. The amendments were proposed by the Association of Natural Gasolene Manufacturers after an exhaustive series of tests conducted during the past year. George P. Bunn, assistant superintendent of the gasoline department of Phillips Petroleum Co., and chairman of the test committee, reported findings of the natural gasoline association tests. Members of the gas association who had co-operated in the tests endorsed the committee findings. The technical and research committee of the gas men passed the proposed testing code as amended on to the board of directors of the Natural Gas Association for final approval with the recommendation that both associations stand sponsor for the code.

Propose Pipe Line Tests

AN exhaustive search of tests covering the flow of gas through pipe lines will be undertaken by the association if recommendations of the research committee are adopted. The committee hopes to enter a general study of the subject and ask the aid of the Bureau of Mines, the American Gas Association and the Association of Natural Gasoline Manufacturers. This work will be carried on by the gas transportation

committee headed by H. D. Hancock, Bartlesville.

In the absence of F. M. Towl, of New York, chairman of the gas testing committee, H. C. Cooper, Pittsburgh, general chairman of the research and technical committee, presented a report of progress in the current tests on gas measurements. Tests have been made at Cleveland for a number of months with specially constructed orifice meters for use later as reference meters. Next tests will be under varied conditions at Buffalo. Later ones will be made in the Mid-Continent with various gases and conditions.

Technologists of the gas industry are anticipating the time when natural gas will have to be supplemented with other fuel, it was revealed at the meeting today. J. H. Maxon, Muncie, Ind., chairman of the committee on gas distribution, laid down an ambitious program of research for his committee which contemplates, among other things, the study of pipe which will best be suited for use for artificial gas after the natural gas is exhausted.

No necessity exists in the natural gas industry for standardization of line pipe, according to the opinion of members of the general committee. No recommendations will be made to the American Petroleum Institute for a system of standards. The gas industry uses the same type of line pipe used in water, steam and other industries and standardization must include those users as well, it was believed.

President Leonard Talks on Change in Organization; Field Methods

TULSA, May 18

THE annual address of the president of the Natural Gas Association of America, A. W. Leonard, was made on Tuesday morning, May 18, before the convention in Tulsa. Mr. Leonard was elected president last year at the Atlantic City meeting.

The association has been in existence for 21 years; this is known as the "Coming of Age" convention. There has arisen now for action the question of the continuance of the association in its present form. In some quarters there is sentiment in favor of merging the N. G. A. with the American Gas Association, which now is composed of members interested in manufactured gas. Some favor the establishment of a Southwestern division of the N. G. A., with headquarters and a secretary, to bring into the organization a great many men not now reached from the Eastern headquarters in the intimate way the leaders of the association desire.

Mr. Leonard pointed out that there are open three courses: state organizations; affiliation with "some other" association of similar purpose; a larger and more useful natural gas association. "Personally," said Mr. Leonard, "I am a great believer in one large association with an efficient working organization."

Action was expected during the convention on some change in the present organization and the belief of some of the charter members of the N. G. A. was that it would take the form of a merger with the American Gas Association. Owing to the N. G. A. constitution, such action could be only proposed this year, another annual meeting would have to be held to ratify it.

After reviewing the association's work during the past year and discussing briefly the need for changing the present associational form, Mr. Leonard discussed some of the methods employed by the natural gas industry of the Mid-Continent and Southwest. Along this line he said:

"In our field operations, we do things perhaps somewhat differently than you do in the other gas producing areas. Some companies, for instance, have worked out a plan which they believe guarantees absolute fairness to producers in the amount of gas taken from their respective wells each month. In each district a certain percentage is decided upon at the beginning of every month. This percentage, which is based upon the actual open-flow of the wells is used as a standard in each particular district and, as nearly as possible, enough gas to make that percentage is taken from each well in the district.

"To accomplish this result, the men in the field offices have to keep strict watch over the daily deliveries from the wells and each day figure the percentage that already has been taken.

"In figuring these percentages a daily accumulated total of deliveries is kept on each well, and that figure is divided by the monthly open-flow of that particular well to give the per cent to date.

"Under the conservation rules of our Corporation Commission, the maximum amount of gas that can be taken from a well in any one day is 25 per cent of the open-flow. In Osage county which is under the supervision of the United States government, the maximum is 20 per cent.

"To eliminate the waste which is caused by taking the open-flow each month, the Corporation Commission of this state is now trying to bring to the natural gas industry a method of determining the amount of gas that can be taken from a well daily, without having to blow the well. We, in the southwestern district, believe that this new method of taking the percentage of open-flow is a step forward in the natural gas industry as to conservation.

"A closer co-operation of this association with the Bureau of Mines and Bureau of Standards, who have already been of great value, will lead to the adoption of more practical methods of conservation and the revision of theories that are impractical.

"All companies are showing more activity in the methods used to preserve the pipe lines. Some companies are taking up lines that have been laid ten to fifteen years, cleaning and painting, then re-laying them. New methods have been devised for cleaning and painting pipe.

"One company has a furnace at their general warehouse, where they heat the pipe, clean and paint it while the pipe is hot.

Using Mud-Laden Fluid

"I BELIEVE you also might be interested in what we have accomplished in the way of using mud-laden fluid for controlling gas wells in order to allow oil producers to drill to lower sands.

"We have had, in Oklahoma, wells that tested from 80 to 100 million cubic feet of open-flow. And we have been able to halt the flow of gas entirely by the use of what we call a 'lubricator' filling up the wells with a 12 to 20 per cent solution of mud and water. The amount of mud-laden fluid to be used depends upon the depth of the hole and the amount of fluid to be absorbed by the sand or sands which are not cased off.

"We know from personal experience that there is no well too large in volume or rock pressure but can be killed by the use of mud-laden fluid, if we have in the hole even one string of casing on which to attach a Bradenhead or 'lubricator,' in order to pump into the well a 20 per cent solution of mud and water. This process we call 'lubricating' the well.

"When a string of casing is not entirely holding a well, we have been able to run in a string of three-inch pipe perforated at the bottom and with a Bradenhead on the top; then start the mud down through the three-inch, which is equipped with a check valve at from 100 to 200 feet from the bottom. This check valve is to keep the inside of the tubing clear of mud after you have finished lubricating. The mud is pumped down through the 3-inch and it eventually will begin to appear at the top through the Bradenhead, having crept up outside the three-inch pipe between it and the larger casing. By cracking the

gate valve enough to permit the mud to advance up the hole, but not enough to do away with back pressure, it is only a short time until the mud being supplied through the perforation in the three-inch pipe will kill the flow of gas entirely.

"Then, if no oil is found at the lower depth after the conquered gas sand has been cased off, it is possible to pull the casing up to expose the gas sand again, and bring the well back as a gas producer. It has been our experience, that in virgin territory a well can be brought back to its normal volume and rock pressure within a short time.

Lubricating Second Time

"WE also have lubricated a well again after once bringing it back, have drilled 300 to 400 feet deeper and have not had a blow-out. In order to accomplish this successfully we have kept putting in a small amount of fluid each day as the fluid already in the hole settled from the top. In other words, we have kept the hole continuously full of mud-laden fluid. We then have brought such a well back into an excellent gas producer. One well had 40 million cubic feet of volume with 880 pounds rock pressure both before and after the operation. In the case of lubricating a second time, however, we had to blow the well for three days before we could put the gas into the line. It required that length of time to exhaust the fluid that had backed up into the sand.

"It sometimes occurs that a large volume of gas is encountered unexpectedly when drilling in a hole that carries no casing except a short piece of conductor pipe. The method of procedure in such a case is to drill on through the gas sand and then run 8 or 10-inch pipe, depending upon the size of the hole, setting the pipe on the bottom and filling it with mud-laden fluid. Then, while the pumping operation is in progress, we raise the pipe slightly and, by equalizing the mud on the inside and outside of the pipe, kill the gas off entirely. In running the casing, the largest diameter of pipe that is possible to be used should be put in the well. If you run 6-inch casing, for instance, in a 10-inch hole and try filling the six-inch pipe with mud, the weight of your column of mud will not be sufficient to overcome the gas and a blowout will result.

"We also have had considerable experience in the putting out of gas fires. In the past 18 months we have had three or four large gas wells struck by lightning. We have been able, by the use of solidified glycerin, to extinguish these dangerous and expensive well fires within a few hours. One burning well with a volume of 100 million cubic feet and producing through a 10-inch hole was extinguished four hours after an expert shooter had arrived. A great deal has been accomplished by the use of solidified glycerin as compared to the old methods of hoods or smothering fires with steam from a battery of boilers."

250 Oil Scouts Convene at San Antonio

Staff Special

SAN ANTONIO, May 17.—The National Oil Scouts Association of America began its third annual convention in San Antonio yesterday with constructive discussions looking toward increased efficiency of members of its organization and larger acquaintanceship throughout the industry.

The first business session was marked by inspirational talks Monday afternoon followed by a banquet in the evening. About 250 scouts representing various companies were in attendance.

Election of officers at today's business session was to be followed by a barbecue at Seguin, about 40 miles east of San Antonio, and a dance at San Antonio in the evening.

In the absence of Ben Bell of the Sun Oil Co., president, Paul R. Martin, of the Pure Oil Co., stationed at Wichita Falls, presided at the sessions. Walter Wise of the Texas Pipe Line Co., stationed at Fort Worth, acted as secretary in place of S. M. Semple of the Prairie Oil & Gas Co., who was unable to attend because of his recent transfer to the Amarillo district.

Harry M. Sample, stationed at San Antonio for the Marland Oil Co. of Texas, had charge of the entertainment program.

Eastern Markets Closing Earlier

WARREN, PA., May 15.—Oil marketers at Warren, Oil City and Bradford are closing their offices at 4:30 p. m., sun time, during the period of daylight saving time in surrounding cities. Companies closing at that hour include:

James B. Berry's Sons Co., and Mid-Penn Refining Co., Oil City; Sloan & Zook, and J. B. McMillan, Co. Bradford; Allegheny Petroleum Co., Viking Oil Co., Oil Service, Inc., West Penn Oil Co., Inland Petroleum Co., Keystone Petroleum Co., and Union Oil Co., all of Warren.

FOUR shell stills with towers are going to do the work formerly done by seven, at a refinery plant being rebuilt in North Texas.

At this plant they have made ingenious use of the steam lift principle to throw residuum from one of the stills into an elevated tower, thereby eliminating the need for installing an expensive hot oil pump.

Steam lift also is used to increase the efficiency of the still battery by transferring the bottoms from one still to another by positive action instead of gravity. The plant is designed to skim crude to provide a stock for the manufacture of lube oils by an unusual method.

These features are all described in the first of two stories on this interesting refinery in the May 26 issue.

Tulsa Special Train Tours The East

Staff Special

CLEVELAND, O., May 15..—Tulsa's party of 125 men, representing many of the business institutions and industries of that city, visited Cleveland for one day, May 13. This expedition was then on its eleventh day of a 16-day trip to principal cities of the East. Its purpose was to display the merits of Tulsa and northeastern Oklahoma and as an associate feature to invite real estate men to come to Tulsa to the forthcoming convention of the national association which will be held in Tulsa.

The party traveled in a special train of 11 cars which included eight Pullman sleeping cars, observation car, club car and exhibition car. In the latter the principal products of northeastern Oklahoma and samples from its manufactories were on display. A linotype and printing press aboard the train published a small daily paper. H. O. McClure real estate and insurance man was in charge of the party.

Cities visited in their order were St. Louis, Indianapolis, Cincinnati, Columbus, Pittsburgh, Washington, Baltimore, Philadelphia, New York, Bridgeport, New Haven, Providence, Boston, Springfield, Mass., Albany, Schenectady, Utica, Syracuse, Rochester, Buffalo and Cleveland. From the latter city the party went to Toledo, Detroit and were then to spend two days in Chicago, a stop in Kansas City and thence home.

Among outstanding events of the trip were the entertainment of the party at dinner in Columbus by the Pure Oil Co., a visit to the White House to greet the president, an address to the party in Boston by Secretary of the Navy Wilbur and a call on Governor Smith at Albany.

Oil men in the party were F. A. Baker, C. O. Buckles, Tulsa; J. F. Dowell, Stroud; H. N. Greis, Alf G. Heggem, of the Oil Well Improvements Co.; Frank Hinderliter, of the Hinderliter Tool Co.; R. E. Holcomb, Skelly Oil Co.; L. L. Hutchinson, geologist; R. H. Hughes, B. F. Rounds, Markham Oil Co.; Ellis Wiet, Harvey Young Oil Co.

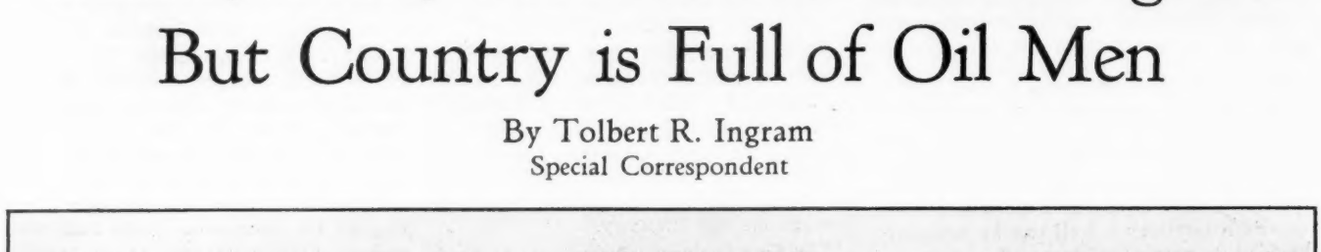
Morrison Enters Jobbing Business

ARKANSAS CITY, KAN., May 15.—A. F. Morrison, formerly sales manager of the Kanotex Refining Co., has become associated with the F. & T. Oil Co. which is engaged in the jobbing business here. Mr. Morrison has been made treasurer of the company. Other officers are L. A. Foster, president, and J. H. Tyberendt, vice president.

TULSA, May 17.—Walter Anderson, president of the Winona Oil Co., Winona, Minn., was in Tulsa a few days around May 15.

Moab, Utah, Test Makes Slow Progress But Country is Full of Oil Men

By Tolbert R. Ingram
Special Correspondent



Ever see an anticline, face to face? In about the center of the picture the rock beds can be seen to dip in opposite directions. If there is oil in such a structure, there is much discussion of what folded the beds that way and learned papers are read on it at conventions. If there is no oil, nobody cares how it got that way or which way it dips. This one has oil. It is the Cane Creek structure in southeast Utah and the well which recently caused the excitement is located in the canyon at right of picture and on the bank of the river.

DENVER, May 14

SOUTHEASTERN Utah, extending from Moab down to the Arizona and New Mexico boundaries, stands in relatively the same position it did five months ago when the discovery well of the Midwest Exploration Co. and the Utah Southern Oil Co. on the Cane Creek dome blew in with an estimated flow of 350 barrels of oil and 2,000,000 cubic feet of gas a day, as far as the known productivity of the area is concerned. This well now is only 4 feet deeper than it was on Dec. 8, 1925, and does not look as good as it did at that time though it is still 400 to 500 feet above the original objective and still a wildcat.

In the five-months interval since the well blew in many things have happened, however, which insures a thorough exploration of the area, a development involving many unique features.

The district, more than 100 miles long and 25 to 50 miles wide, has been blanketed with applications for prospecting permits. Representatives of most of the large oil companies and many new concerns have gone over it gathering up favorable-looking acreage, mapping the structures, of which there are many, negotiating drilling contracts, and laying the groundwork for an extensive exploration campaign. Actual drilling is, however, limited to a comparatively few tests. One reason for this is the difficult nature of the country which requires the construction of roads over bad lands, the moving of equipment along a river route lacking in ample facilities, and the working out of problems that are new to the oil men.

The principal delay is resulting, however, from a lack of knowledge of what the discovery well will do in the way of production. This is, partly, psychological for the reason that it is affecting tests on structures many miles away and related to the discovery very remotely.

The discovery well, John L. Shafer No. 1, on Sec. 6-27-21, approximately on the boundary between Grand and San Juan counties and 8 miles southwest of Moab, on the Cane Creek dome, blew in unexpectedly on Dec. 8, 1925. At first it made some gas, some water and a little oil. The water subsequently disappeared and the well flowed by heads at the rate of approximately 350 barrels per day according to official estimates. Others placed it as high as 1000 barrels. The gas caught fire and the rig was burned to the ground.

Natural Barriers Formidable

IN order to understand the problem involved, a few facts should be kept in mind. The well is located on a narrow ledge on the bank of the Colorado river. The ledge 1000 feet long and 65 feet wide at its widest point pinches out at both ends. Back of the well there rises a cliff 303 feet high and back of this are others rising to a height of 3000 feet. There was no road to the well and all supplies had to be brought down the river by boat from Moab after being trucked from Thompson the nearest railroad station, 30 miles to the north.

When the well blew in, the 10-inch casing was suspended on a spider 20 feet off bottom. There were no tanks, no place for reservoirs, and the hole was open at the bottom with no rig within 200 miles to replace the one burned. It was decided to kill the well and clay was hauled by truck and boat from the north of Moab and pumped into the hole. The pressure forced the mud out as fast as it was pumped in and for 3 months the well could not be killed. Finally, the men were successful and the 10-inch casing was landed and cemented. This collapsed at the bottom and in trying to swedge it out, it was ripped and the water came in. An 8-inch string was run and cemented. But the cement failed to hold after several attempts. Packers were tried without success and then a 6¼-inch string was run with no better success. During this time, the well would break loose at intervals and flow oil and water. The water appeared to be coming from above.

Two weeks ago it was decided to pull the 6¼-inch casing and drill a few feet deeper in hopes of finding a better landing place for the larger string. The bailer commenced bringing up iron. The hole was 2028 feet deep when it blew in, according to a sand line measurement. After the new rig was up, a steel tape measurement showed the bottom at 2024 feet and it was at the latter horizon that the work was done. The presence of the iron disclosed that the original measurement probably was correct and that the casings had not been cemented on bottom. The 4 feet of additional drilling took the hole to a close-grained yellowish-brown sand. At this depth, 3032 feet, water came in.

Will Try to Shut Off Water

Officials of the Midwest express the opinion that the oil and gas, mixed with water, may have come from

a crevice and exhausted itself. However, there is a possibility that the water is coming from above as the pressure between casings decreased when the water in the inner casing rose. A special packer has been made at Casper and another effort will be made to shut off the water. This leaves the fate of the discovery well still in doubt. The presence of the lower Pennsylvanian formation with oil in it and the hole still 400 to 500 feet above the original objective still makes the well a very promising prospect. If the present effort to shut off the water is not successful, the well will be drilled deeper to the original objective.

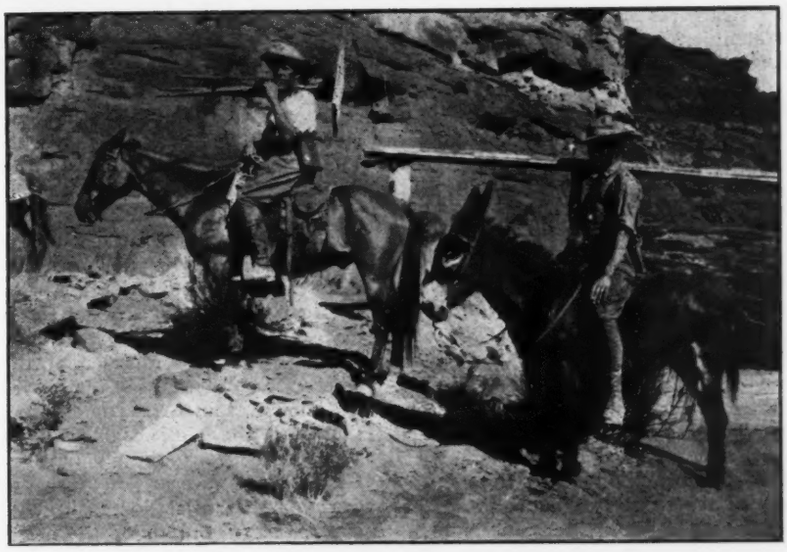
The performance of this well was of a nature, however, to warrant the belief that a new field of large proportions will be found in southeastern Utah and scouts from all over the country began moving in. The land mostly belongs to the government and is obtainable through the granting of prospecting permits. Four structures along the Colorado river south from moab are the center of interest at present. These are the Cane Creek, Shafer, Lockhart and Indian Creek domes.

In 1920, shortly after the signing of the oil land leasing act, H. W. C. Prommel was in charge of a party that went in and geologized some of these structures. The land was unsurveyed at the time. The following spring this party again went in and carried a traverse line down from Moab. They had finished surveying the Cane Creek dome when news of what was taking place drifted back to Denver. Several more parties started in from Monticello, on the south, and other points. One of these used an airplane, explaining its presence at Green River by saying a tourist service along the Grand Canyon was to be inaugurated. A rush to put up monuments and complete their filings was made by the various parties.

It so happened in the rush that some of these filings did not conform to section lines as shown by subsequent surveys with the result that small strips on each of the four structures were left open. Persons identified with the Westland Oil Co., of Salt Lake City, filed upon these strips and that company has made a deal with the Tidewater-Associated Oil Co. for the development of the tracts.

River Bed Lease Granted

THE permits under the leasing act on the four structures cover also the bed of the Colorado river but the state of Utah claims the river bed as state land on the ground that the river is not navigable which is true as far as interstate traffic is concerned. The Texas Co. has made a deal with the owners of the state lease for the river bed land on the four structures and is planning to build a pier in the river and drill an offset to the Cane Creek discovery well. However, it has not yet started work pending the outcome of the Shafer No. 1. Litigation over these tracts is expected but so far it has not developed pending the commencement of actual work.



A pioneer in geological work in the Cane Creek structure region was H. W. C. Prommell, shown here on the horse. Man on the Rocky Mountain canary is Earl Johnson. They are starting out from Epsom canyon camp on one of the rare occasions when mounts could be used. The rest of the time they walked.

The Midwest-Utah Southern interests have started a test on the Shafer dome, 5 miles down the river from the Cane Creek dome. This well, John H. Shafer No. 1, is located on the bank of the river in Sec. 17-27-20. This well has reached a depth of 575 feet and the formations are beginning to correlate with those on the Cane Creek dome and show that structurally it started about 265 feet higher than the Cane Creek well.

The Midwest-Utah Southern interests also are moving in equipment for John L. Shafer No. 1, Sec. 36-26-20, Cane Creek dome, half a mile north of the discovery. This location also is on the river bank, on the west side, and a pier is being built for handling material. It is not certain however, that this well will be drilled at once pending the outcome of the discovery. Owing to the errors in surveys previously mentioned, the Cane Creek well was not located on the permit land supposed to be drilled but the government recognized the good intentions of the companies and extended the permit and the John L. Shafer No. 1 is being started to correct this mistake.

These four structures are, however, only a few of the many extending on down to the Arizona line. About 50 miles south of the Cane Creek dome and 25 miles due west of Monticello, is the Elk Ridge dome, believed to be one of the largest in the country. The Midwest is preparing to make a test but it has considerable work to do before it can get material in as a 20-mile road will have to be built and road building in that country isn't a job for an ordinary county commissioner. This structure has between 70,000 and 80,000 acres inside of the closing contour and the closure is approximately 2000 feet. This gives some idea of the kind of structures to be found in the area. Utah Southern, Midwest Oil, Wyoming Associated and other Midwest affiliations have permits on the structure.

The Sentinel Oil Co., of California, has leased fee land and secured permits on 25,000 acres in the Monticello district in San Juan county extending from Coal Bed canyon on the east to Montezuma canyon on the west an will move in two rigs, one a rotary and the other a standard for cable tools.

Will Drill Prommel Permit

SNOWDEN & McSWEENEY, successful operators in the Artesia field in New Mexico, and long identified as producers elsewhere, have secured a tract on the Cane Creek dome and made a location on the Prommel permit in Sec. 5-26-21, about one mile east of the discovery well. The Midwest will drill the well on a contract basis and is moving material to the pier at Cane Creek. However, it will require the construction of a 2-mile road to get the material on location a mile away. The difficulties of transportation in this country may be realized from what a prominent geologist said. He declared that in his opinion the site for every well drilled will have to be blasted out.

The Deseret Petroleum Co. is starting a test on Sec. 3-30-20, Gibson dome, or Indian Creek structure as it is sometimes called. The company estimates that it will take a month to get the rig to location. Boiler is already at the site, eight days being required to go about 40 miles, 12 horses being required to pull the load and frequent stops having to be made to make road improvements.

Boulder Knoll Oil Co. has contracted for a test with standard equipment west of the Montezuma, Colorado, county line, just across the border in Utah.

The Sinbad structure, which straddles the boundary between Grand county, Utah, and Mesa and Montrose counties in Colorado, probably will be tested this summer. The records show that permits are held in the name of employes of the Midwest Refining and associated compaies. The Utah Oil Refining Co. is building a road preliminary to testing the Indian Creek structure and several

other structures are in line for test wells this summer.

Regardless of the outcome of the discovery well, it is apparent that an extensive drilling campaign south of Moab is in prospect for this summer. However, the territory north of and west of Moab is not being neglected. The Empire Petroleum Co., in which Franklin D. Roosevelt, former secretary of the navy is the moving spirit, has started a well on the Moab anticline in Grand county, on Sec. 20-25-21. The Embar Oil Co. has taken over the old Big Six well close to the town of Moab, on Sec. 34-25-21, and will complete it. The Big Six well is the one which had numerous shows of oil and gas when it was drilled several years ago and gave the geologists the first information as to the stratigraphy of the structures in that area. It is bottomed at 2870 feet and is being cleaned and cased preparatory to going deeper to tap the Cane Creek producing horizon. The Embar company is also drilling on Sec. 22-25-21.

Charles E. Orchard and associates, are drilling on Sec. 4-19-25, Hartley dome, Grand county, just across the Colorado line west of Grand Junction. A local company with a small outfit drilled to 700 feet last year and found gas and this led to the new test. However, unlike the other wells in that area, this test is to the bottom of the Morrison formation only and will not attempt a test of the Pennsylvanian at this time.

The most important test in the region to the northwest of Moab at this time is Culbertson No. 1 of the Marland Oil Co. on Sec. 35-21-16, near the town of Green river. It cut a sand at 2401 feet which showed saturation and it looked like a well. The scouts gathered to see it come in but the showing was in a 4-foot sand in the Shinasrump conglomerate and it still has some distance to go to reach the Pennsylvanian. It looks very encouraging. This is the farthest north of any of the Pennsylvanian tests.

Here's An Old Timer

A LITTLE to the southeast of the Marland is the test of the Crescent Eagle Oil Co. on Sec. 4-22-19 which is below 4000 feet and down to a 3-inch hole. This well has been drilling several years and has shown oil, gas, water, beds of salt, black shale of the Pennsylvanian, gypsum, potash and a little of everything else and is an interesting test even if it is generally supposed to be off structure. The scouts have gone to the site more than once on reports that it was a commercial producer.

There are several other wells drilling by local concerns in the area around Moab but these are not generally considered structural tests. The prospecting is extending over into Colorado in the southeastern corner of the state and contracts have been let or are about to be let for at least two Pennsylvanian tests. One of these is 5 miles west of Pagasa Springs, in Archuletta county. Sand is expected at 2500 feet.

This review of activities has not included the extreme southeastern corner of Utah where the operations are held up mostly awaiting the outcome of congressional action on lands included in Indian reservations by presidential proclamation. However, just north of the San Juan river, there is some activity where the Utah Southern is drilling on the East anticline and where several other tests are scheduled.

There isn't much to be gained at this time by quoting the opinions of geologists on the conditions in the area south of Moab. Enough to say that there is the usual division of opinion that comes out ahead of the facts revealed by the drill. There are some who say the oil, if found, will come from salt domes similar to those on the Gulf coast while others scout the idea, pointing out that the Gulf coast domes are of much more recent age than the domes in Utah and southwestern Colorado.

Lots of Strangers in Town

MOAB is the principal point from which men and supplies go into the northern area and Monticello is outfitting point for the southern end. Hotels are all full and the country is rapidly being adapted to the new conditions. Most of the equipment from the north will be moved by river and the river bank will be lined with rigs if everything turns out as hoped for. In that event, the river will be a scenic attraction of more interest than will develop solely from the high cliffs, the variegated rocks and the Indian sign writings and cliff dwellings. Water will be obtained mostly from the river. It carries considerable silt and has to be allowed to settle for a day or two. A bucketfull will yield about one-third silt. After being cleared in that manner it is boiled to make it drinkable.

The Denver & Rio Grande Western railroad has been furnished with estimates of material to be moved in by the Midwest interests. These call for approximately 5,000,000 pounds a year for five years. That is for the Midwest program alone.

Less Fuel Oil Consumed On Pacific Coast

SAN FRANCISCO, May 14. — Less fuel oil was consumed on the Pacific coast in 1925 than in 1924, the Pacific Coast office of the Bureau of Mines reports. The largest decrease in use of fuel oil was at gas and power plants. Comparison of consumption by leading fuel oil users in the two years follows:

	Bbls., 1924	Bbls., 1925
Shipping (Bunkers)	22,609,182	23,445,074
Railroads	29,369,775	28,838,456
Gas and Power Plants	12,908,188	8,421,641
Smelters and Mines	3,996,361	4,852,986
Steel Mills	914,521	1,320,199
Sugar Refineries	1,452,158	1,164,275
Logging and Lumbering	2,456,408	2,859,938
Cement Plants	3,935,406	3,662,963
Oil Companies	5,592,523	5,690,383
Others	12,972,148	9,294,997
Domestic Consumption	96,206,670	89,550,912
U. S. Navy	3,249,234	4,779,368
Exports, Etc.	21,691,832	23,016,111
Total Marketed	121,147,736	117,346,391

Wins Suit for Payment of Cracking Royalties

NEW YORK—The Gasoline Products Co., Inc., has issued the following statement:

"The United States district court for the district of Nebraska (Omaha Division) entered judgment on April 30, 1926, for $9,162.12 against Omaha Refining Co. in the suit commenced by Gasoline Products Co., Inc. for the collection of royalties owed by Omaha Refining Co. as licensee under its license contract dated May 4, 1923, licensing the operation of the Cross cracking process under patents owned by Gasoline Products Co., Inc.

"The pleadings indicate that the royalties were paid under the contract until June, 1924, when Omaha Refining Co. declined to pay further royalties on the plea that such payment would subject it to liability in view of the suit commenced in June, 1924, by the United States government against Gasoline Products Co., Inc., The Texas Co., Standard Oil Co. of Indiana, Standard Oil Co. of New Jersey and their various licensees, charging alleged violations of the Sherman anti-trust act.

"The pendency of this suit was set up as a special defense by Omaha Refining Co. in the suit but the district court held that the defense was not good and struck out the portion of the answer setting it up; and there being no other defense offered, entered judgment in favor of Gasoline Products Co., Inc., for all royalties due and unpaid under the license contract up to Dec. 24, 1924, on which date the contract was cancelled by Gasoline Products Co., Inc., for non-payment of royalties.

"This judgment follows closely on a judgment for approximately $33,000, recovered by Gasoline Products Co., Inc., in a suit against American Refining Co. at Wichita Falls, Texas, in the state court, in which substantially similar facts were involved and the obligation of American Refining Co. under the license contract was enforced notwithstanding a similarly unsuccessful attempt on its part to set up the pendency of the government suit as a special defense."

Kanotex Has New Sales Manager

ARKANSAS CITY, KAN., May 15—Lloyd Lesh, who has been acting as sales manager for the Kanotex Refining Co., since the first of the year was elected second vice president of the company on May 1. He is in permanent charge of sales for the company.

Mr. Lesh succeeds A. F. Morrison who became ill late last year and has spent a number of months in a hospital at Rochester, Minn. Since his return to Arkansas City, Mr. Morrison has become associated with the F. & T. Oil Co.

Government Challenges Validity of All Pressure Cracking Patents

By Special Correspondent

WASHINGTON, May 17

THE opinion has been widely held that if the U. S. government suits against the Patent Club are successful, and the patents held by members of the club are cancelled as invalid, Dubbs and perhaps some other owners of cracking patents outside of the membership of the club, would stand forth as monopolists of the cracking art.

This opinion, after talking with some of the government attorneys, seems to be unfounded. Success of the government's suit, it has been pointed out within the past week, would put the owners of all patents covering heat and pressure cracking on the defensive, because, it will be remembered that the government, in its original petition, filed almost two years ago, made this statement (Page 12):

"There is, at this time, however, no valid United States or foreign patent covering broadly the basic features of present day processes, i. e. heat treatment under super-atmospheric pressure." That seems to be an attack on every patent in the United States or any foreign country covering heat and pressure cracking.

It is understood, of course, that if the Adams patents are proved by the government to be invalid through having been obtained by misrepresentation, as alleged in the government's petition, that will not automatically cancel patents that may have been obtained by others. It would seem that each supposed basic patent will have to stand on its own feet.

There is no charge in the government's pleadings that either the Standard of Indiana, Standard of New Jersey or Gasoline Products Co. Inc., the other members of the Patent Club, were involved in the alleged frauds asserted to have been perpetrated upon the patent office by Adams. And of course, the proving of the government's contentions as to the Adams patents would have no effect on the status of the Barton, Jenkins, Dubbs or any other patents covering a cracking process.

Might Upset Other Patents

HOWEVER, if the government should proceed beyond the attempt to prove the invalidity of the Adams patents and should produce evidence that would prove to the satisfaction of the court the broad allegation that "there is at the present time no valid patent broadly covering the basic features of present day processes," even though the court should not find it necessary to pass upon this question, it seems likely that every company collecting royalties on the operation of cracking units using heat and pressure would be compelled by its licensees to prove its right to collect such royalties and the selling of cracking installations and process rights might be placed on a different basis.

It is pointed out that it is not the purpose of the government to snatch away the advantages conferred by ownership of broad patents from one set of owners and pass them on to another cracking process proprietor or group of them.

Asserting and offering to prove there was no valid basic United States or foreign patent on heat and pressure cracking, the government alleged further that the "procuring and treating of said patents and asserted patent rights by the defendants as valid patents and patent rights covering and controlling said process for cracking gasoline is but a device to lend color of legality to the hereinafter described combination, conspiracy and monopoly."

As to the relation of other companies to The Texas Co.'s course in obtaining and handling the Adams patents, the government's supplemental petition goes on to say:

Origin of the Patent Club

"THE feature of distilling and condensing under self-generated super-atmospheric pressure, to secure which the fraudulent affidavits were procured and used, is a feature to which the Standard Oil Co. (Indiana) had made claim in patents that issued shortly before the claiming of this feature by Adams. The procuring of these claims would place The Texas Co. in a position where the Standard Oil Co. (Indiana) could not attack the patentability of this feature, nor prove claims to this feature to be anticipated and invalid without weakening its own patents; and where the Standard Oil Co. (Indiana) and The Texas Co. could each strengthen the other by mutual agreements to recognize each other's patents as valid.

"Moreover, if this feature were absent from the Adams patents—assuming that there would be any Adams patents without this feature—there would be nothing on which to base the pretense that there were mutual infringements between The Texas Co. and Standard Oil Co. (Indiana), on which is based a justification of necessity for the cross-licensing and pooling of agreements.

"The procuring of claims to this feature of distilling and condensing under pressure was thus an essential preliminary to the making of the cross-licensing agreements and was specially fitted for this purpose.

Motive For Fraud Alleged

"Moreover, until it appeared that the Standard Oil Co. (Indiana) had committed itself to this feature and Adams entered the employ and received the assistance of The Texas Co., this feature had not been mentioned in the Adams application claims and had never been used by Adams in his experiments, extending over a number of years prior to the issue of the Standard Oil Co. (Indiana) patents. That is throughout all of this period of years prior to the securing of the option by The Texas Co. there was nothing in the Adams process or apparatus or claims that would serve the purpose of the fraudulently obtained claims. ****

"Thus it will be obvious that Adams and The Texas Co. had a purpose in procuring false and fraudulent affidavits, and this purpose was to create a situation suited and fitted for the making of mutual licensing and patent pooling agreements with the Standard Oil Co. (Indiana) and others, which agreements were subsequently made. Adams, The Texas Co., and The Texas Co.'s attorneys have used, to the fullest extent, the advantages obtained through fraudulent affidavits.

"These efforts and actions of Adams and The Texas Co. constitute not only a conspiracy to obtain a patent monopoly by fraud and illegal means, but a conspiracy looking forward to the utilization of the illegal patent monopoly thus obtained in a wider conspiracy, with others, to control the art of cracking and production of gasoline through a combination of patents and thereby a control of cracking processes.

"They thus constitute a part of the larger conspiracy. The element of fraud does not lessen, remove, or justify the conspiracy. For while the fraud in itself forms a sufficient ground for the cancellation of the patents obtained through its use, that does not constitute a ground for preventing the showing of fraud as an element of conspiracy."

New Evidence Recently Found

ACCORDING to the government's supplemental petition, admitted to the record by the Chicago court, May 3. The Texas Co. itself "spilled the beans" as to Adams being a necessary party to the suit against the patent club members by means of its answers to the government's interrogatories dated Feb. 25, 1925. Until then the government asserted it did not know of Adams' connection with what it calls the conspiracy, which connection it asserts was established when The Texas Co. asserted that Adams was a participant in the royalties, or that he had ratified, or approved, or become a party to any of the primary agreements.

Week's Crude Price Changes

May 15.—Prairie Oil & Gas Co. advanced all grades of Oklahoma, Kansas and North Texas crudes which it buys on a gravity basis, 25 cents. Gravity schedule was unchanged, the advance bringing the minimum grade of 28 to 28.9 gravity to $1.65 and maximum grade of 52 and above to $3.57.

Major purchasers who met the Prairie advance immediately, included: Magnolia Petroleum Co., which met the Prairie schedule in full in Oklahoma, Kansas and Texas, excepting in the Panhandle district of Texas. Magnolia also advanced crude in these fields below 28 gravity 10 cents to $1.30 on May 15.

Humble Oil & Refining Co. met the Prairie in full in Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie and Moran, and also posted Mirando, southwest Texas crude, for the first time at $1.25, which is an advance of 10 cents over the price previously paid by Magnolia Petroleum Co.

The Texas Co. met the Prairie schedule in full in Oklahoma, North, North Central and Central Texas.

May 15.—Kay County Gas Co., (Marland subsidiary) re-graded crude in the Panhandle district of Texas, and posted a new scale of prices, with minimum grade of 28 to 28.9 gravity at $1.35 and 5 cents added to each succeeding degree up to maximum grade of 39 and above, which is $1.90. The Kay company's previous schedule of five grades had as its top grade 40 and above, posted at $1.75.

May 15.—Humble Oil & Refining Co. advanced all grades of Gulf Coastal crude 10 cents, making "A" grades $1.60, and in "B" grades, minimum grade of below 25 gravity $1.50 with 5 cents additional for each full succeeding degree, up to 35 and above gravity, which is $2.05. Humble's purchases in Gulf Coastal fields are in Goose Creek, Hull, Liberty, West Columbia, Orange, Boling and Pierce Junction.

Other major purchasers who met Humble's Gulf Coastal crude advance on May 15 include The Texas Co., Gulf Production Co. and Sinclair Refining Co.

May 15.—Midwest Refining Co. advanced all grades of Salt Creek crude 25 cents, making minimum grade of 29 to 29.9 $1.73 and top grade of 37 and above at $2.37.

May 15.—Magnolia Petroleum Co. advanced Corsicana, Tex. heavy crude 10 cents, to $1.25.

May 17.—Joseph Seep Purchasing Agency advanced Cabell, Somerset medium and Somerset light crude 20 cents to: Cabell, $2.40 Somerset medium, $2.50 and Somerset light, $2.65.

May 17.—Ohio Oil Co. advanced all Central States crude 25 cents, excepting Wooster which was advanced 20 cents. New prices are: Wooster, $2.55; Lima, $2.48; Indiana, $2.25; Illinois and Princeton, $2.37; Waterloo, $1.35; and Plymouth, $1,90.

May 17.—Ohio Oil Co. advanced all Rocky Mountain crude 25 cents, excepting Sunburst, Mont. which is unchanged. New prices are: Elk Basin, Grass Creek, light and Lance Creek, $2.40; Big Muddy and Rock Creek, $2,25; Mule Creek, $1.75; Rex Lake, Wyo., $1.45; and Artesia, N. Mex., $1.95.

May 17.—Midwest Refining Co. advanced Grass Creek, light, Elk Basin, Osage, Cat Creek, Mont. and Hogback, N. Mex. crude 25 cents. New prices are: Grass Creek and Elk Basin, Osage, and Cat Creek, $2.40, and Hogback, $2.45.

May 18.—Standard Oil Co. of Louisiana advanced all North Louisiana and Arkansas crudes, including excepting Bellevue, 25 cents and all grades of Smackover crude, 10 cents.

The advance was met immediately by the Louisiana Oil Refining Corp., Atlantic Oil Producing Co., and the Shreveport-El Dorado Pipe Line Co.

New prices in all fields are published in the crude oil price table, excepting in the North Louisiana and Arkansas fields, where the advance was effective May 18. Prices in the table are those in effect May 17.

Coming Meetings

Natural Gas Supply Men, Inc., at International Exposition Grounds, Tulsa, May 17, 18, 19, 20.

American Petroleum Institute, Standardization Conference, Hotel Broadmoor, Colorado Springs, Colo., June 15, 16, 17.

Minnesota Petroleum Association and Wisconsin Independent Oil Jobbers Association, joint meeting, Hotel Stoddard, La Crosse, Wis., June 16.

Illinois Petroleum Marketers Association Kaskaskia Hotel, LaSalle, Ill., June 23.

Michigan Independent Oil Men's Association, Grand Hotel, Mackinac Island, July 15, 16.

Mid-Continent Gasoline Markets Settling

TULSA, May 18.—Slight improvement in volume of new business was noted in Mid-Continent refinery markets today. Three or four refiners who have been quoting 12¼ to 12½ cents for U. S. Motor gasoline, were asking only 12 to 12¼ cents today. A few refiners continue to ask 12½ cents for U. S. Motor but one refining-marketing company offered U. S. Motor to the trade at 11¾ cents, saying the company had 25 to 50 cars to move. One buyer reported purchasing a car or two from a broker at 11½ cents, but said 12 cents was low from refiners.

Light gasolines are piling up at several refineries and prices are nearer 58-60 U. S. Motor than normally. One order for 20 to 30 carloads of 60-62 gasoline was placed for prompt shipment today at 12½ cents and other sales of this grade have been reported closed at 12¾ cents. Two or three refiners are quoting 60-62 at 13 cents.

Late T. W. Changes

Continental Oil—T.w. and s.s. prices gasoline advanced 1 cent, Denver, Pueblo, Casper and Cheyenne, **May 18.** Prices are not changed in accompanying tank wagon table, as prices in the table are those in effect on May 17.

* * *

Continental Oil—Kerosene prices advanced 1 cent, Denver, Pueblo, Casper and Cheyenne, **May 18.** Prices are not changed in accompanying tank wagon table, as prices in the table are those in effect on May 17.

Shipments from Los Angeles Week Ended May 15

(Barrels of 42 Gallons)

	Crude	Gasoline	Gas Oil	Fuel Oil	Tops	Kerosene	All Products
Atlantic Domestic	235,000	388,315	.....	186,000	.....	.....	808,315
Atlantic Foreign	.....	64,753	.....	107,000	.....	.....	171,753
Pacific Domestic	659,619	104,295	.....	205,011	.....	.....	968,925
Pacific Foreign	.....	.....	.....	479,853	.....	.....	479,853
Total Shipments Week Ended May 15							2,429,846
Total Shipments Week Ended May 8							2,220,324
Total Shipments Week Ended May 1							1,655,546

Ships Clearing for Atlantic Ports

Java Arrow, Baltimore, with 85,600 barrels gasoline for Standard Transportation Co.

H. C. Folger, Philadelphia, 78,173 barrels gasoline for Atlantic Refining Co.

Gulf Trade, Fall River, 80,000 barrels crude for Gulf Refining Co.

Halo, Boston, 78,000 barrels crude for Cities Service Refining Co.

Emidio, Baltimore, 74,292 barrels gasoline for General Petroleum Corp.

Agwi Mars, Baltimore, 76,000 barrels fuel for Atlantic, Gulf & West Indies Steamship Co.

E. M. Clark, Baltimore, 110,000 barrels fuel for Standard Oil Co. of California.

Tustem, Philadelphia, 70,000 barrels gasoline for Atlantic Refining Co.

Agwi World, New York, 77,000 barrels crude for Atlantic Refining Co.

Bohemian Club, Philadelphia, 80,250 barrels gasoline for Atlantic Refining Co.

Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

Mid-Continent Refinery Operations Week Ended May 14 (By Telegraph)

	Kansas	%Change Previous Week	Oklahoma	%Change Previous Week	No. & Cent. Texas	%Change Previous Week	No. La.-Ark.	%Change Previous Week	Totals Week Ended May 14	%Change Previous Week	Totals Week Ended Apr. 16
Plants Reporting.....	23		46		41		14		124		124
Daily Cap. (Bbls.)....	98,200		165,900		144,300		51,700		460,100		460,100
Da. Av. Crude Runs..	58,287	+ 3.7	97,724	+ 3.4	68,199	+10.1	46,759	— 1.7	270,969	+ 4.1	246,219
Da. Av. Other Oils....	7,611	+11.1	621	—93.7	4,160	—19.5	—185	.....	12,207	—42.8	8,600
GASOLINE—Gallons											
Stocks May 7.....	11,598,276		43,000,714		18,010,518		6,606,167		79,215,675		90,463,591
Prod. 5-7 to 5-14.....	9,171,178	— 0.3	13,015,501	— 0.3	7,201,545	— 1.2	3,098,473	+ 2.8	32,486,697	— 0.2	30,768,064
Ship. 5-7 to 5-14.....	8,936,220	— 9.0	16,626,531	— 2.1	6,995,091	—11.3	3,665,185	+ 2.5	36,223,027	— 5.4	32,101,187
Stocks May 14.....	11,833,234	+ 2.0	39,389,684	— 8.4	18,216,972	+ 1.1	6,039,455	— 8.6	75,479,345	— 5.7	89,130,468
Ratio Sales to Prod...	97.4%		127.7%		97.1%		118.3%		111.5%		104.3%
KEROSENE—Gallons											
Stocks May 7.....	1,293,580		2,775,312		1,258,128		355,557		5,682,577		7,661,314
Prod. 5-7 to 5-14.....	1,619,424	+23.2	2,959,387	+ 3.3	1,549,688	+27.0	487,404	— 5.6	6,615,903	+11.8	4,570,255
Ship. 5-7 to 5-14.....	1,528,850	+ 3.1	2,835,127	— 2.4	1,470,286	+24.9	497,160	—11.6	6,331,423	+ 3.3	5,833,600
Stocks May 14.....	1,384,154	+ 7.0	2,899,572	+ 4.5	1,337,530	+ 6.3	345,801	— 2.7	5,967,057	+ 5.0	6,398,969
Ratio Sales to Prod...	94.4%		95.8%		94.9%		102.0%		95.7%		127.6%
STOVE DISTILLATE—Gallons											
Stocks May 7.....	758,659		1,909,878		191,092		46,956		2,906,585		2,235,794
Prod. 5-7 to 5-14.....	472,932	— 7.5	214,039	—62.3	279,256	—10.9	5,670	—80.3	971,897	—31.6	1,217,630
Ship. 5-7 to 5-14.....	262,180	—1 .9	173,815	—60.6	234,787	—34.2	23,730	+135.4	694,512	—35.4	1,355,848
Stocks May 14.....	969,411	+27.8	1,950,102	+ 2.1	235,561	+23.3	28,896	—38.5	3,183,970	— 9.5	2,097,576
Ratio Sales to Prod...	55.4%		81.2%		84.1%		418.5%		71.5%		111.4%
GAS OIL—Gallons											
Stocks May 7.....	7,764,561		35,806,034		6,753,717		5,172,216		55,496,528		52,852,595
Prod. 5-7 to 5-14.....	1,566,944	+ 2.0	1,471,924	—37.0	—618,899	.....	2,046,416	— 1.6	4,466,385	—31.1	6,338,051
Ship. 5-7 to 5-14.....	1,152,734	—13.6	1,385,772	—12.6	1,176,940	+1073.0	1,204,002	—66.5	4,919,448	—25.7	4,961,491
Stocks May 14.....	8,178,771	+ 5.3	35,892,186	+ 0.2	4,957,878	—26.6	6,014,630	+16.3	55,043,465	— 0.8	54,229,155
Ratio Sales to Prod...	73.6%		94.1%		.....		58.8%		110.1%		78.3%
FUEL OIL—Gallons											
Stocks May 7.....	6,326,468		37,886,990		19,848,556		5,419,467		69,481,481		63,416,498
Prod. 5-7 to 5-14.....	5,211,348	+ 0.3	8,210,421	—10.2	9,263,292	+10.8	7,541,471	— 2.6	30,226,532	— 0.7	27,287,003
Ship. 5-7 to 5-14.....	4,945,724	+13.5	8,869,291	+17.2	9,675,362	+21.4	7,334,183	+ 0.9	30,824,560	+13.5	27,482,612
Stocks May 14.....	6,592,092	+ 4.2	37,228,120	— 1.7	19,436,486	— 2.1	5,626,755	+ 3.8	68,883,453	— 0.9	63,220,889
Ratio Sales to Prod...	94.9%		108.0%		104.4%		97.3%		102.0%		100.7%

Working Down of Gasoline Stocks Continues

By Telegraph

TULSA, May 18

DRAFTS on gasoline stocks at 124 Mid-Continent refineries which have been continuously reported each week for the last month, were large, again shown in the week ended May 14.

Shipments were somewhat less than in the preceding week but were still in excess of 36,000,000 gallons while production was kept less than 34,500,000 gallons.

Withdrawals from storage totaled 3,800,000 gallons at all plants, bringing total stocks down to 75,479,345 gallons. Gasoline stocks at substantially the same group of plants on May 15, 1925, totaled 76,238,495 gallons or 800,000 gallons more than stocks last Friday. During the four weeks ended May 14, stocks were reduced 13,651,123 gallons.

The higher kerosene market has resulted in a slight increase in the yield percentage of that commodity. For the week ended May 7, refiners recovered 7.7 per cent of their still charges as kerosene but last week their yield was 8.3 per cent.

The yield of both gasoline and stove distillate was lower indicating that both were cut into to make the kerosene. Total production for the week was 6,615,903 gallons and shipments 6,331,423 gallons. Total reserves of 5,967,057 gallons still represent less than seven days' supply.

Fuel oil stocks were reduced slightly and gas oil stocks increased slightly during the week.

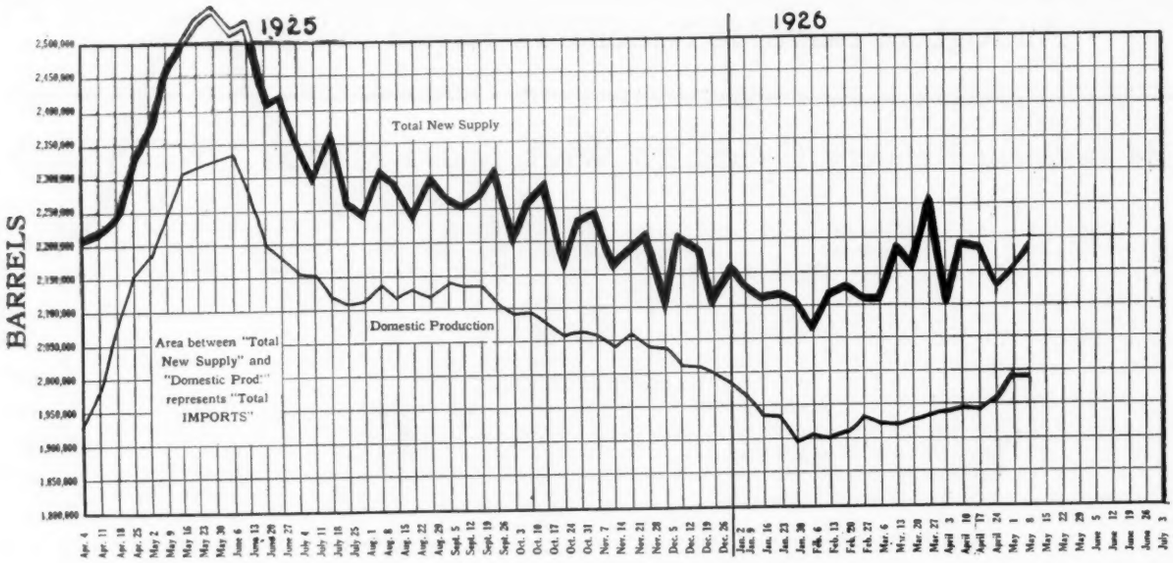
Crude charges were increased 10,000 barrels daily average but rerun charges were reduced 9000 barrels daily average.

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended May 14. Change in stocks figured from Apr. 16.

	Gallons
Gasoline	
Production	130,545,554
Shipments	144,196,677
Net change in stocks	—13,651,123
Ratio sales to production	110.5%
Kerosene	
Production	24,147,816
Shipments	24,578,728
Net change in stocks	—430,912
Ratio sales to production	101.8%
Stove Distillate	
Production	5,363,220
Shipments	4,276,826
Net change in stocks	+1,086,394
Ratio sales to production	79.7%
Gas Oil	
Production	22,149,093
Shipments	21,334,783
Net change in stocks	+814,310
Ratio sales to production	96.3%
Fuel Oil	
Production	120,761,771
Shipments	115,099,217
Net change in stocks	+5,662,554
Ratio sales to production	95.3%

Daily Average Crude Oil Production and Imports



Daily average gross crude output of United States, by fields, for week ending with dates given below, as compiled by American Petroleum Institute

OKLAHOMA

	May 15	May 8
North Braman	1,900	1,900
South Braman	13,700	12,750
Blackwell	4,250	4,300
Hubbard	1,900	1,950
Thomas	4,150	4,400
Tonkawa	37,700	38,150
Garber	43,650	39,750
Burbank	41,100	41,150
Osage, outside Burbank	33,450	33,400
Watchorn	2,600	2,650
Cushing	21,800	21,850
Yale-Jennings	16,700	17,850
Davenport	12,900	13,650
Bristow-Slick	29,750	29,850
North Okmulgee	17,800	17,750
Lyons-Deaner	4,300	4,300
Stroud	2,350	2,350
Cromwell	18,300	18,400
Papoose	12,000	12,200
Wewoka	32,950	32,200
Duncan District	7,150	7,200
Graham	9,400	9,350
Fox	4,450	4,400
Healdton	14,450	14,900
Hewitt	12,200	12,200
Others	6,670	66,550
Total Oklahoma	467,600	465,400
Increase		2,200

KANSAS

Florence-Covert	1,750	1,700
Peabody-Elbing	4,400	4,400
Eldorado-Towanda	14,000	14,000
Augusta-Fox-Bush	4,850	4,850
Rainbow Bend	4,600	4,450
Russell	5,600	5,700
Greenwood County	43,000	43,450
Others	26,600	26,600
Total Kansas	104,800	105,150
Decrease		350

NORTH LOUISIANA

Homer	5,750	5,800
Haynesville	10,200	10,350
Caddo, light	9,100	9,050
Caddo, heavy	2,250	2,100
De Soto, Red River	4,050	3,950
Elm Grove	600	550
Bellevue	2,500	2,500
Cotton Valley	8,600	8,600
Urania	12,900	12,150
Total North Louisiana	55,950	55,050
Increase		900

ARKANSAS

El Dorado	7,500	7,650
Smackover, light	17,450	17,500
Smackover, heavy	135,450	134,700
Stephens	1,900	1,950
Nevada	3,200	3,300
Lisbon	11,500	10,650
Total Arkansas	177,050	175,750
Increase		1,300

NORTH TEXAS

	May 15	May 8
Burkburnett	12,300	12,250
Electra	16,050	16,200
Iowa Park and K-M-A	4,250	4,250
Wilbarger	12,200	12,600
Panhandle	21,600	18,200
Petrolia	450	500
Archer County	31,100	31,350
Others	2,550	2,500
Total North Texas	100,500	97,850
Increase		2,650

EAST CENTRAL TEXAS

Mexia	13,100	13,300
Currie	1,050	1,050
Richland	1,700	1,700
Corsicana-Powell	30,300	30,600
Wortham	9,550	9,650
Total East Central Texas	55,700	56,300
Decrease		600

WEST CENTRAL TEXAS

Stephens County	13,050	13,150
Eastland County	5,700	5,950
Desdemona	1,850	2,600
Young County	7,000	7,600
Palo Pinto County	450	500
Callahan County	3,600	3,300
Shackelford County	4,800	5,650
Reagan County	32,600	33,600
Others	10,400	10,050
Total West Central Texas	79,450	82,400
Decrease		2,950

SOUTHWEST TEXAS

Luling	21,650	22,700
Mirando	6,900	6,800
Somerset	5,600	2,150
Lytton Springs	6,100	6,300
Piedras Pintas	200	200
Others	600	600
Total Southwest Texas	41,050	38,750
Increase		2,300

GULF COAST

Goose Creek	8,550	8,750
Hull	20,700	21,600
Saratoga	1,200	1,150
Blue Ridge	1,250	1,100
Damon Mound	850	850
Batson	1,300	1,150
West Columbia	9,050	8,900
Humble	3,800	3,850
Pierce Junction	1,250	1,250
Sour Lake	4,050	4,050
Spindletop	5,800	3,400
Orange County	10,850	11,550
Edgerly	1,050	100
Evangeline	950	1,050
Vinton	6,500	6,500
Lockport	4,950	5,250
South Liberty	4,900	5,200
Big Creek	1,050	1,100
Boling	4,750	6,800
Others	2,250	1,200
Total Gulf Coast	95,050	95,800
Decrease		750

ROCKY MOUNTAIN

WYOMING

	May 15	May 8
Salt Creek	51,700	53,600
Grass Creek	3,050	2,900
Elk Basin	650	650
Big Muddy	3,550	3,500
Lost Soldier	5,050	4,450
Rock River	2,850	2,850
Teapot Dome	1,150	1,400
Others	4,550	4,700
Total Wyoming	72,550	74,050
Decrease		1,500

MONTANA

Cat Creek	2,950	2,900
Sunburst	25,000	25,900
Total Montana	27,950	27,900
Increase		50

COLORADO

Moffat (Craig)	3,650	3,600
Fort Collins	2,550	2,550
Florence	350	350
Others	500	500
Total Colorado	7,050	7,000
Increase		50

NEW MEXICO

Artesia	3,050	3,000
Hogback	450	450
Rattlesnake	300	200
Total New Mexico	3,800	3,650
Increase		150
Total Rocky Mountain	111,350	112,600
Decrease		1,250

CALIFORNIA

Santa Fe Springs	49,500	50,000
Long Beach	106,500	103,000
Huntington Beach	44,000	46,500
Torrance	28,000	27,000
Dominguez	20,500	20,500
Rosecrans	17,000	17,500
Inglewood	51,500	53,000
Midway-Sunset	95,000	94,000
Others	192,500	192,500
Total California	604,500	604,000
Increase		500

EASTERN

(Including Ill., Ind., Ky., Ohio, W. Va., Pa., and N. Y.)	106,000	105,000
Increase		1,000

PRODUCTION SUMMARY

Prod. east of Rockies	1,394,500	1,390,050
Increase		4,450
Total Prod. in U. S.	1,999,000	1,994,050
Increase		4,950

Home Life Provided on Wildcat Test 55 Miles from Railroad

By Paul Wagner
N. P. N. Staff Writer

On The 9K Ranch,
CULBERSON CO., TEXAS.

OUT here in a little colony of tar paper shacks, small but tidy, beneath the shadow of a lonely wildcat rig, a band of gently reared girls are carrying forward with their husbands the spirit of oil country pioneering.

Here the infant members of four families are keeping robust 55 miles from the nearest town, or, as distance is measured in this region, five mesquite-thorn punctures from a railroad.

The air is light and healthful, good food is made available by transportation facilities of the Pure Oil Co., which is drilling the test, and there is only the wind to disturb the solitude by ringing the doorbells.

It has been facetiously said that this is the region where bull snakes mount flivvers and rattlers chew up the tires. The statement is not entirely incorrect, although the Pure Oil colony at the Quaid wildcat, in Texas & Pacific sec. 9, block 63, have experienced no harrowing contacts with the reptiles.

Maurice A. Finney, drilling superintendent for the Pure on this test, confirms the statement, however, that on one trip into Carlsbad, N. M., for mail and provisions, he drove his car over a rattlesnake crossing the road, in an effort to kill it. The snake wrapped itself about the wheel and began "fighting" the tire. When the inner tube was examined it was found to have been punctured seven times, inferentially as a result of snake bites through the casing.

An authenticated case of a bull snake's friendliness was told in Carlsbad, near which New Mexico town a party of tourists had stopped to take a picture of one of these non-poisonous rancher's friends. As the amateur photographer swept around the rear of the car to snap his kodak, the bull snake began climbing the running board of the flivver, which was quickly emptied as the occupants scurried out of reach.

This, however, is not to be a tale of reptiles and their habitat. The presence of the snakes and great numbers of jack rabbits are mentioned only to complete the picture of the region's habitation, which would be sparse were it not for the Pure Oil colony on the Quaid ranch. Except for the ranch headquarters, two miles east of the well, and another dwelling midway between the drilling site and Carlsbad, there are no inhabited houses within 40 miles to the northward.

—N. P. N. Staff Photo

Maurice A. Finney, drilling superintendent for Pure Oil Co., on Quaid test in Culbertson County, Texas.

SUPERINTENDENT FINNEY, himself a young man, is a believer in the progress that marks the beginning of a new age in the oil industry. Hence he has surrounded himself with the younger men, whose wives and children on the job with them insure against migratory habits or fits of loneliness. Mrs. Finney, a graduate of the University at Fayetteville, Ark., is also with her husband.

Two older men are in charge of the drilling tours because, Mr. Finney explains, of the tough "digging" and the need for their greater number of years of experience. It is related that in a depth of more than 2300 feet drilled, the cable tool bits passed through only one foot of shale formation. E. A. Berry, who was with the Burmah Oil Co., in India, for six years, is one of the drillers. George Bixler, who drilled in West Virginia and Kentucky before spending a year with the United British Petroleum Syndicate in South America, is the other.

The usual camp procedure of maintaining a mess hall in charge of a chef is reversed at Quaid Colony, where the two drillers board at the cabin of one of the tool dressers, each family otherwise having its home life in its own way.

One Dodge and two Pierce-Arrow trucks that haul fuel and other material out from Carlsbad transport provisions for the members of the colony. The roads are rough, over upturned limestone slabs and through deep ruts, but they are seldom muddy. It was necessary to build a "corduroy" crossing over the Delaware river, a short distance from camp, against the occasional times when it provides drainage for the Guadalupe mountains, to the northward, instead of the usual supply of dust.

The crossing was made of Spanish yucca trees, which grow in the region, wired together to make a mat. The night the crossing was first in place there came a 15-foot rise in the Delaware river, which can be sportive at times, resulting in the crossing being carried away. It was hauled back five times before finally settling into permanency.

A necessity exists for keeping avenues of transportation open at all times, because trucking provides the sole source of provisions and fuel. The rig is operated by a Clark drilling engine and gasoline is moved in from Carlsbad. Fuel consumption now is about 90 gallons daily, but the average has been from 110 to 120 gallons because of the grief encountered at higher levels in the hole.

Grief from the Start

THE Quaid wildcat was spudded in August 31, 1925. Drilling was hard from the start. A pin was knocked off the bit at 37 feet. The stem was knocked in two at 72 feet, and again at 105 feet. Other small fishing jobs made their appearance at various levels, but the first serious trouble developed while reaming between 1500 and 1600 feet.

A crevice parallelling the hole for 80 feet, from 1520 to 1600 feet, brought about the grief that caused the crew its greatest delay. The formation at this level is described as being so hard that it apparently was impossible to get anything in the hole to make the bits hold the side of the wall.

When reaming was started the hole had been filled up with limestone off the hillside, which served to aid in proceeding with the operation.

Other efforts to take care of the situation included the placing of two shots of nitro-glycerin, one of 60 quarts at 1530-1560 feet and the other of 65 quarts

at 1560-1587 feet. Another shot of 100 quarts was then placed at the lowermost level mentioned. In the meantime, two bailers had been lost in the hole. They went off to either side of the crevice and stayed until the last shot brought one of them back. Most of the iron was drilled up in a 12½-inch hole, after which the crew ran in 10-inch and cleaned out ahead until it was possible to get the pipe down.

Sliver "Thing" On Bit

IT was after this had been done that a sliver got "hung" around the bit, which necessitated the pulling of pipe and cutting out with a torch. The pipe was set at 1612 feet.

Reaming was begun on December 5, 1925. The first shot was placed January 20, 1926; and the last two shots, February 7 and 10. The 10-inch was run in first on February 19, it was pulled March 30 and reset April 5.

When the start was made to place the third shot the possibility of using 200 quarts was considered. Seven inch shells with 3-inch aprons were used. One of the shots went off into the crevice 190 feet past the bottom of the hole.

Ed Shoefstall, then shooting for the Mendenhall interests, let this shot into the depth mentioned, which compared approximately with the bottom of the 6-inch hole. The shell was placed on a shot line and a squib was used to discharge it. That was the shot which brought one of the bailers back into the hole and out of the crevice.

The second bailer was lost in pulling out, on the opposite side of the hole. Every effort was made to get it out by other means, but it, along with the bailer retrieved by the shot, had to be finally drilled up.

E. A. Berry and George Bixler, drillers on Quaid wildcat.
—N. P. N. Staff Photo

A 6-inch pilot hole was carried down from 1603 feet to 1799 feet and reamed out to 10-inch after setting the pipe at 1612 feet. Thereafter, the drilling grief down to the present depth of below 2300 feet consisted merely of hard "digging," without even a semblance of a soft spot.

The rig is equipped with 98-foot all steel L. C. Moore derrick, including sills, main sill, sampson post, pitman and walking beam. A Clark drilling engine of the type growing more and more popular in semi-arid territory is used for power.

Drilling water is obtained from a well a mile and a quarter north of the rig, which at 60 feet depth is capable of watering 1000 head of cattle daily. The water has both gypsum and lime content, but the use of the Clark drilling engine instead of boilers makes this no handicap. The water supply for the camp is made potable by distilling.

Bits Tempered with Cyanide

A STRAIGHT cyanide-chloride mixture, about 76 parts cyanide to 24 parts chloride, is used in tempering bits used on the job. This mixture when sprinkled on the bits becomes fluid and forms a thin case hardened surface on the cutting face and outside edges.

Without this mixture, according to the crew, a bit would not stand up 30 minutes in any of the formations drilled in the Quaid test from 350 feet down to the present depth. Even with the use of the mixture to harden the bits one of them will run only about two hours before going back to the tool dresser for heat treating.

The Pure's test is being drilled on a block of 80 sections belonging both to the Quaid family and the Texas & Pacific railroad. The sections alternate in ownership, every other one belonging to the railroad under an old grant made by the state of Texas.

The Log of a Thousand-Mile Motor Trip Through Eastern New Mexico

By Paul Wagner
N. P. N. Staff Writer

FRIDAY, (Tucumcari, N. M.)—

WE, my more or less trustworthy "whoopie" herder and myself, arrived in Tucumcari after 135 miles of driving from Amarillo and a climb of Tucumcari Mountain that served to sharpen the edge of appetites that needed no urging.

The wind which we had with us all day must have been lost itself, since no matter which way we turned it chapped our lips and parched our throats with caliche dust. This was especially true as we dropped down the western edge of the Llano Estacado into the more sharply eroded plains of northeastern New Mexico.

We had traveled from Amarillo almost to the western boundary of Texas over the monotonous stretches of the high plains, where in three directions the view is uninterrupted and in the fourth it remains unchanged.

Our first look into the more broken country to the westward afforded us a considerable measure of relief and raised our lagging spirits. The sharply defined buttes and mesas visible for more than a hundred miles to the westward made a strikingly beautiful picture in the afternoon sunlight as we descended the sandy breaks of the escarpment and proceeded into New Mexico.

The way wound past red shale and sandstone buttes eroded into fantastic shapes and through the deep cut sand-choked beds of the seasonal streams which occasionally drain this part of the state, until at length we topped a sharp rise and beheld the town of Tucumcari spread out below.

Tucumcari Mountain, which rises some 1000 feet above the elevation of the surrounding country, had been on our port bow for more than 50 miles, and its heights seemed to hold a strange fascination for my companion. Heretofore, being wholly untutored in the mysteries and demands of mountain climbing, I had discouraged his attempts to stop the "whoopie" and climb the multitudinous smaller buttes along the route. He could not be restrained, however, from essaying the almost perpendicular slopes that led to a magnificent panorama of the staked plains sweeping southwesterly out of Texas and the broad valleys and high table lands to the west and north.

Riding Herd on Wildcats

WE found in Tucumcari that we were not the only ones riding herd on New Mexico wildcats. There we discovered foregathered certain other nomads of the tribe of King Petroleum, including Horace Fitzpatrick of the Prairie Oil & Gas Co., whose mission was to diagnose the case of an ail-

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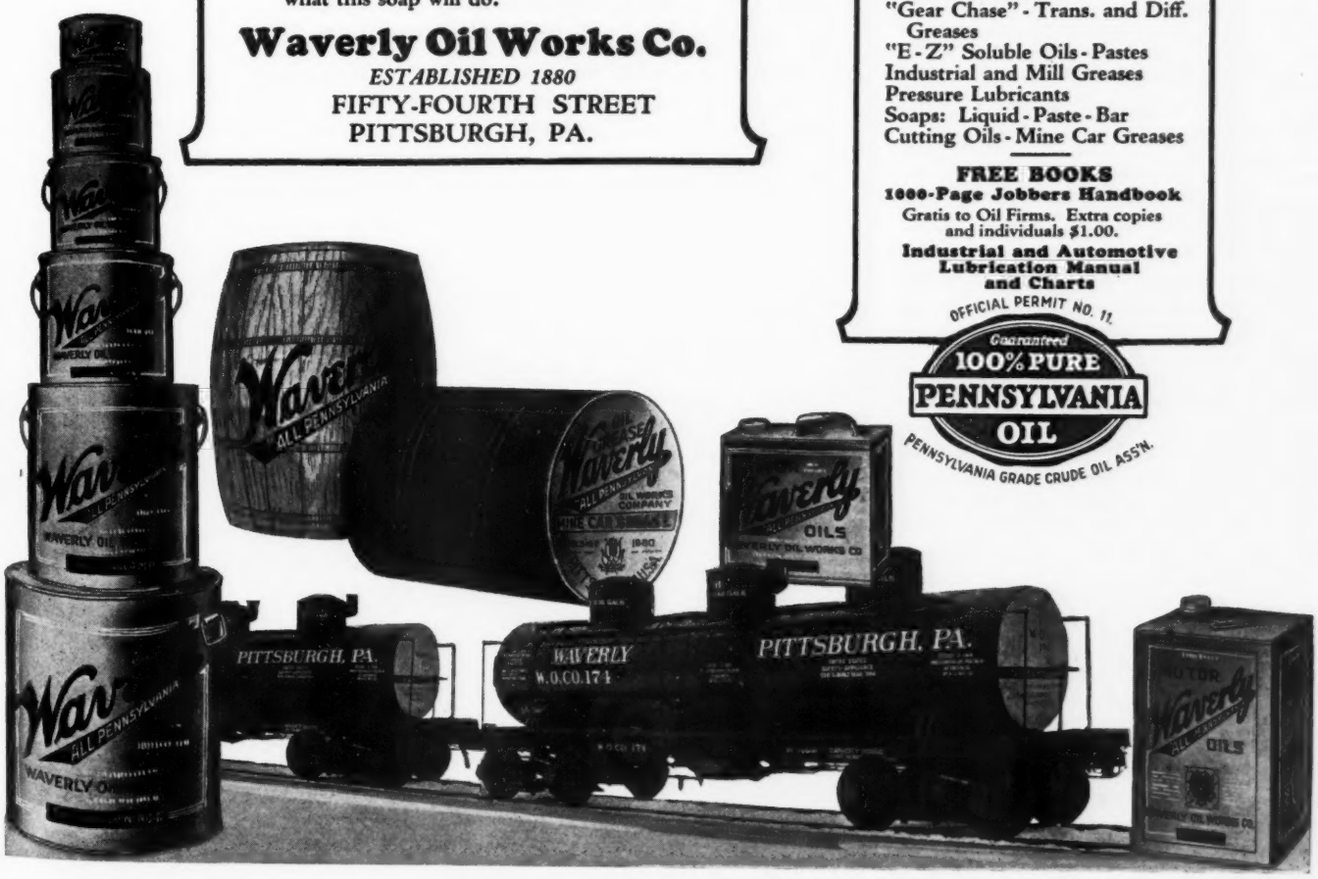


ing wildcat near Logan. We heard among other things that a band of scientists were attempting to maintain their torsion balance along the crest of the granite ridge extending into this territory from the Texas Panhandle, but the identity of the group had been carefully shielded.

SATURDAY (On the Bell Ranch)—

We arrived at the signboard of Petrolia, along the right-of-way of the El Paso & Southwestern branch line from Tucumcari to Dawson, N. M., 23 miles northwest of Tucumcari, in the record time of one hour and thirty minutes. The "whoopie" had been abandoned for the day and the trip made on the "Polly," which is a train of parts, 18 parts empty coal cars returning to the mines farther north, one part baggage coach and one part passenger accommodations.

Petrolia siding reflects in its name more the essence of things hoped for than the reality of ambitions attained. Here we luckily found a tool dresser from the Marland wildcat in 3-13N-29E, who had driven his Dodge truck down to the siding for a fresh supply of provisions sent out from Tucumcari. Had he not been there we might have enjoyed a brisk four-mile walk over boulder-strewn country to the well.

Rattlesnake Canyon Appropriate

THE Bell ranch test is located near the mouth of Rattlesnake canyon. The appropriateness of this name was impressed on us when we were told that only the day previously one of the "varmints" had unsuccessfully undertaken to dispute possession of the derrick. The location and camp have a not unlovely setting, surrounded on three sides by cliffs of massive sandstone, while to the east a long slope of pasture land leads down to the valley of the Canadian river. The test is now shut down awaiting the arrival of special size pipe. After this has been set it is planned to drill ahead in 4¾ inch hole.

Isolation is the chief drawback to life at the camp in shutdown periods, but the meals are good and there are enough odd jobs around the location to keep the time of two or three men reasonably well occupied. Harry Wright, a veteran of the Healdton boom, is czar of the kitchen; and Messrs. Rockhill and Martin remain on the job as caretakers pending the resumption of operations, after which they will resume their regular roles as tool dressers.

The camp is seldom visited by any of the numerous employees on the Bell ranch, which comprises 490,000 acres. This is due to the remoteness of the location from the usual ranch activities and not to any lack of interest. Ranch headquarters, about 20 miles away over rough country, are not easy of access from the well, except on horseback or roundabout travel by train. At 5 o'clock we managed to flag the inbound "Polly" and proceeded again to Tucumcari for the night.

SUNDAY (Roswell)—

Twenty-five miles due south of Tucumcari, as we again mounted the Llano Estacado, or staked plains, we found our wind of Friday waiting for us, much refreshed by its 36-hour wait and in sportive mood

It is difficult to work up much enthusiasm over a surface devoid of relief and it was over such that we rolled 60 miles south and east into Clovis. Here a Fred Harvey lunchroom was in waiting to appease our stomachs and put us in a mental attitude to brave the flat stretches which lay ahead southwesterly toward Roswell, 117 miles distant.

It is perhaps incorrect to leave the impression that the staked plains are entirely devoid of relief, for there are developed thereon shallow surface lakes, commonly called playas, into which the very young drainage channels empty the casual precipitation of the area.

Among these playas there are some which through the development of a large drainage area have become permanent lakes. The waters of these are slightly alkaline. The smaller playas have water in them only at irregular intervals following the spasmodic periods of rainfall. The drainage area of these is so small and so much of the water seeps into the porous surface of the plains that when water does stand in the playas it is fresh and potable.

Igneous Dike Observed

VIRTUALLY the only other feature to draw our attention during the afternoon was a dike of igneous material observed near the western edge of the plains, southwest of the town of Elida. On either side of the dike, erosion was more pronounced than in the other parts of the plains we had traversed. It was dark when we descended into the valley of the Pecos river. Beyond this stream twinkled the hospitable lights of Roswell.

MONDAY (Carlsbad)—

From Roswell to Artesia our way lay down the fertile valley of the Pecos river. Irrigation is here used to good purpose, the water being obtained from artesian wells. Away from the valley, where irrigation is not practiced and where rain seldom falls, the impression is one of desolateness.

Artesia Building Up

THE town of Artesia shows little change since the writer visited it last summer. Its residence district has built up somewhat and the presence of two or three amply stocked supply houses gives the atmosphere of the oil country. The failure of the Artesia field to be pushed out materially on either front has curbed the activity of the lease broker and the trader, with the result that a few substantial, but generally small, operators make up the town's oil quota Here, at Carlsbad or in the field are found the men taking care of the properties, but generally the operators live entirely away from the territory.

From the field we proceeded as nearly due east as winding trails and sand dunes would permit until we again reached a point under the west scarp of the Llano Estacado. Here, after sundry inquiries at a lonely ranch house—the only one we had found in a distance of nearly 30 miles—we located the Maljamar gasser, in 21-17-32, which is now making a deep test for oil below 3260 feet. A more isolated drilling site hardly could be found.

We returned to the ranch house and its population then directed us southward five miles to two windmills. Having reached this point we were to search carefully for an unused road bearing in a generally southeasterly direction, which if we were able to follow it would lead us up on the caprock of the Llano Estacado.

After achieving this part of our journey, (I shudder to think what might have happened had we not achieved it) we were to proceed southward, keeping always to the high ground and eschewing all temptations to follow better looking trails to the lowlands. We followed instructions to the letter and, much to our surprise, came out on the Lovington-Carlsbad highway, some 45 miles northeast of Carlsbad.

On our way into town we passed a camp of Marland geologists, proving the statement that anywhere you may go you will find three things, a Ford car, a New York Herald and a Marland geologist. We reached Carlsbad before midnight, tired but happy in our temporary comfort.

Wildcat's Character Doubted

TUESDAY (On the 9K Ranch)—

WE visited a pure wildcat on the 9K ranch in Culbertson county, Texas, reached by a drive which took us out of southeastern New Mexico only about 15 miles. After the type of roads covered, my "whoopie" driver ventured to doubt the character of the wildcat. He became reconciled to the term, however, because of its being drilled by the Pure Oil Co., on Quaid land.

The horizontal distance to the test well from Carlsbad is not great, but as the

West Texas Wildcats

The highly-important wildcat operations of West Texas did not all lie directly in Mr. Wagner's path as he returned to home base from New Mexico. So he went where the wildcats are. In articles to be published starting in next week's issue, he describes several tests which may prove to be the beginning of fields out in that vast area where at least one county has so few inhabitants as not to have a county seat and no local government.

Millions of dollars are going into West Texas in the eternal search for new fields. Mr. Wagner has added to his already intimate knowledge of Texas petroleum by going to the spots where the money is being spent.

jack rabbit runs so our "whoopie" bounded over upturned slabs of limestone and into seemingly bottomless ruts. Aside from the condition of the roads the trip was not unpleasant, as the country through which we traveled was one of pronounced relief, with many buttes and mesas and always in view to the westward the Guadalupe range of mountains culminating in the commanding eminence of Capitan peak.

After our visit to the well we inquired as to the possibility of an alternative route back to Carlsbad, but were emphatically informed that such was out of the question. We grimly secured hammer-holds on various parts of the car's anatomy and set its nose toward Carlsbad, across alkali flats where old Joe Buzztail lies on his rattles to keep them from blistering and the jack rabbits take turns sitting in each others shade.

The Quaid well is located about 15 miles south of the New Mexico line. For the brief period required to make the Texas part of the trip we operated on central time as against the mountain schedule to which our watches were set. Mountain time is still in good repute in New Mexico and western Kansas, but wherever the flag of Texas flies central time is recognized regardless of meridians.

THIS wounded the sensibilities of my companion no less than the aimless and casual manner in which Texas survey lines wander around the landscape. The county maps show sections neatly numbered, even though the system is unique. The strange contortions performed by survey lines, and the almost total lack of section corners on the ground, are not merely disturbing but actually appalling to one educated in the ordered methods of the oil industry. Can you imagine an oil company drilling two producing wells in the same district, in another part of Texas, only to find that not one but both of them were located on the leases of, and therefore belonged to a competitor? Yet, this is what Texas surveys do to, or for, us, as the case may be.

Having returned over the limestone slabs and ruts necessary to be traversed again we were ready for a last night in Carlsbad before leaving New Mexico next day.

Nocona Shallow Field Production Passes 2000 Barrels Daily

Staff Special

HOUSTON, May 14

THE recent sale of Humphreys Corp. holdings in the Nocona field to the Texhoma Oil & Refining Co., now controlled by the Continental Oil Co. of Denver, has again drawn attention to shallow development in Montague county, about 50 miles east of Wichita Falls. The Humphreys properties, consisting of about 1500 acres, nine oil wells and two gassers, together with about 300 barrels daily production, sold for an announced cash consideration of $450,000.

Daily production in the Nocona field now amounts to upwards of 2,000 barrels, reflecting the recent completion of the Humble Oil & Refining Co's. No. 1. Maddox well, on the west side of the field, which came in for 500 barrels of 22 gravity oil at depth of 858 feet. Most completions in the field make from 50 to 100 barrels daily, initial production, although there have been a number of wells good originally for 150 to 200 barrels, maximum.

Wells in the Nocona area have been completed on two parallel structures separated by a broad syncline, giving effect to an east side and a west side development. The structure consists of a southeast plunging main axis separated by the syncline from the parallel axis.

Original development was mainly on the Howard property, in the John Chamblis survey, where the Texhoma was active long before that company came under control of the Continental about the first of the present year. This part of the Nocona area is known as the east side development.

More recently, the west side development has been carried forward in the area of the Hynds, Jones and Hinton farms, about three miles to the westward from the original Texhoma operations.

Development on the west side is in the hands of The Texas Co., the Pure Oil Co., the Humble, the E. L. Smith Oil Co., and others, including most of the properties taken over by the Texhoma from the Humphreys Corp.

Oil In Sandy Limes

AS many as seven or eight oil and gas horizons are found in the Nocona area at depths from 650 to 1850 feet. These range in thickness from 5 to 25 feet, and average from 4 to 15 feet of pay. Most of the oil horizons are sandy limes, although granitic material (arkose) has been penetrated in some instances.

The Humphreys Corp. drilled into granite in at least one well on the Hinton tract; and granitic wash sands were found about half way between the Hinton property and the original Howard development of the Texhoma, roughly three miles east. Nocona Oil & Gas Co's. Lemons test, on the south flank of the developed structure, in the Samuel Little survey, is also reported to have penetrated granitic wash material.

Deep wells on the Texhoma's Hinton property, acquired from the Humphreys interests, produce 39.7 gravity oil at 1850 feet, as compared with the heavier grade crude found at shallower levels there and elsewhere in the Nocona area. Some of the crude oil gravities in the field are as low as 21.9 degrees.

Nocona oils testing below 30 gravity have sulphur contents of 1.07 to 1.27 per cent, but this is virtually absent from the lighter crudes. The reason for the sulphur content in the low gravity crudes is believed to be the oxidation of the oil in contact with edge water, although this has not been proved.

Gravity Higher with Depth

A peculiarity of the producing situation at Nocona is apparent in an examination of the record covering a group of six wells on the Howard property, east side structure, as follows:

Well	Sand (Feet)	Gravity (Degrees)
No. 1	854	20.9
No. 2	1002	25.7
No. 3	1397	28.1
No. 4	1631	28.3
No. 6	1435	27.8

All these wells were drilled as close together as they could be packed, on the east line of the Howard property, the fact that they were to exploit different pay horizons accounting for the limited spacing practiced.

Gasoline recoveries from Nocona crudes vary according to gravities, some of the refinery tests showing about as follows:

28 gravity crude—6.7 per cent of 54.8 gravity gasoline;

28.3 gravity crude—8 per cent of 58.9 gravity gasoline.

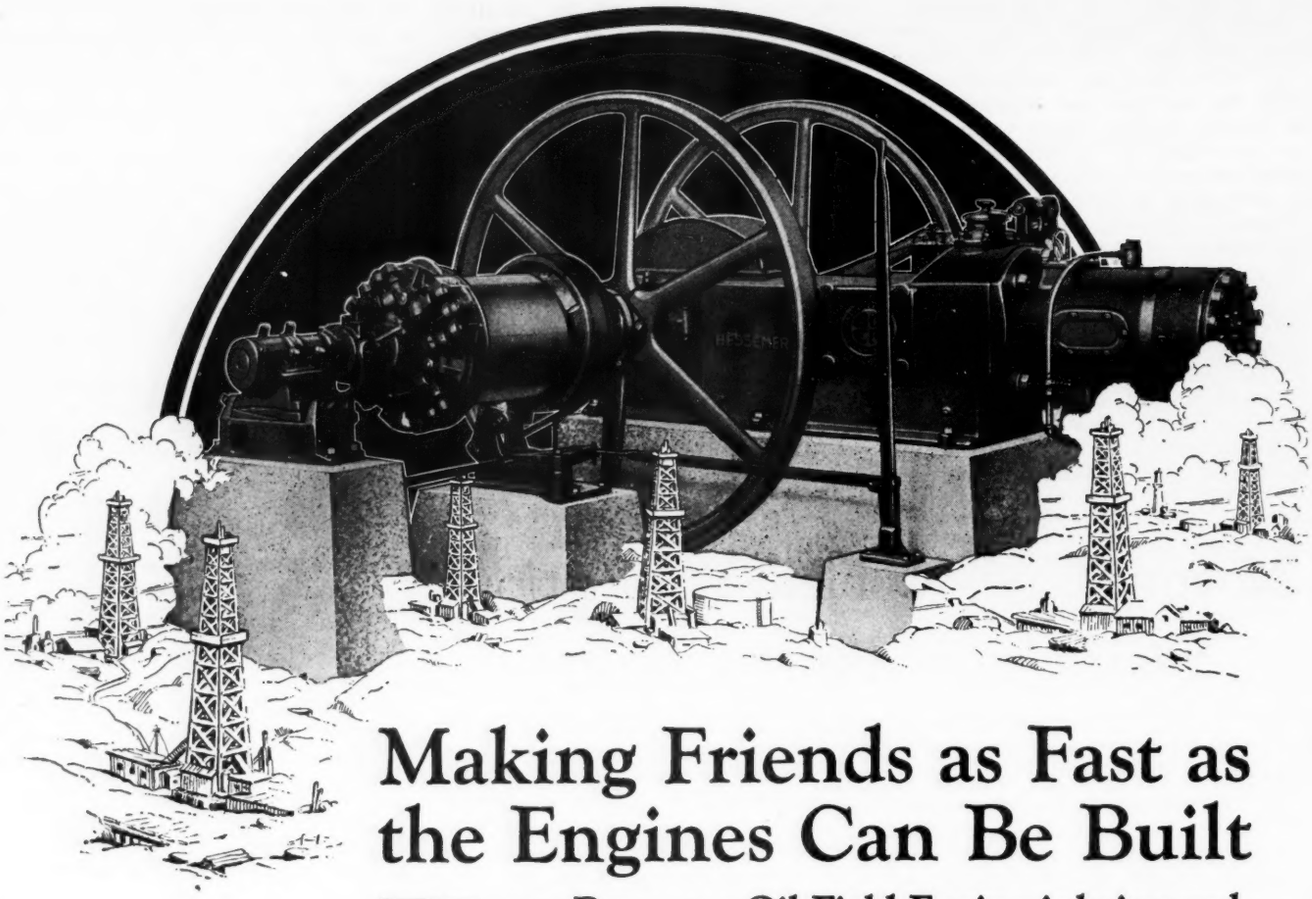
Gas Volume Heavy

THE big gas found at depths from 650 to 850 feet, and yielding from 5,000,000 to 130,000,000 cubic feet daily, has made it necessary to cement full strings of large casing in drilling to the underlying oil levels. The gas has rock pressures varying from 210 to 290 pounds.

Because of the gas situation mentioned drilling costs have been high in the Nocona field as compared with other relatively shallow developments. Costs of early wells fully equipped, excluding only leasehold investment, are indicated in the following examples:

Depth (Feet)	Cost
1850	$26,000
905	12,250
880	9,750
925	9,250
850	8,500

It is true that exceptional cost attached to the completion of the aforementioned wells and that operations may be carried forward hereafter under more advantageous conditions. The figures are cited, however, as showing what drilling has cost in some instances in the past.



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Prairie Raises Mid-Continent Crude; Other Fields Also Advance

By A. F. Hinton
N. P. N. Staff Writer

TULSA, May 15

ALTHOUGH an advance in Mid-Continent crude prices had been looked upon as probable for several weeks, none had ventured to fix the exact date of its occurrence, nor had anyone been so bold as to predict as to the amount by which it would be raised. It was looked upon as certain to come within the next few weeks, and it is probable that the average man would have said that the increase would be something like ten cents a barrel.

This morning it came like a bolt from the blue, for once not antedated by the usual crop of more or less authoritative rumors that generally usher in a crude advance—at least, the rumors did not start flying earlier than 24 hours prior to the actual occurrence. And when it came, it was not a ten-cent raise, or any such minor amount, but a full-grown boost of 25 cents a barrel on each of the 25 grades now comprising the schedule of Mid-Continent crude.

The Prairie Oil & Gas Co. made the initial move, announcing its new prices early this morning. In a few minutes, Sinclair Crude Oil Purchasing Co. announced that it had met the new scale, followed closely by the Gypsy Oil Co. and the Kay County Gas Co. In a short time, all principal purchasers of crude had formed in line and had made their crude prices identical. The Kay County Gas Co. went a step farther, and announced a new schedule of prices covering Texas Panhandle crude, increasing the number of grades and raising the price 15 cents a barrel on the top quotation. Humble Oil & Refining Co. met the Prairie's prices in areas where they both buy oil and followed with a ten-cent advance for Gulf Coastal crude and a fifteen-cent advance for crude from the Mirando field.

This is the first crude advance since Feb. 1, 1926, the second of the current year, and only the fourth change in crude prices in 10 months, or since July 10, 1925. In its posting of last February, the Prairie added eight grades to the 17 already existing, running its prices up to cover crude of 52 degrees gravity and over. In today's revision of the price, this schedule remains unchanged as to number of grades, and the 25-cent increase all along the line brings the top price for Mid-Continent crude up to $3.57 a barrel, with a minimum price of $1.65.

It is evident that the Prairie Oil & Gas Co. believes it necessary to stimulate drilling, in addition to the number of new connections it may be able to secure, if any, by virtue of its new prices. In the past, the company has used price increases to stimulate the search for new fields, and, when production had reached, or was approaching, a point which it considered high enough, a reduction in price, or a series of reductions, usually has been successful in slowing down drilling and checking the bringing in of new producing areas.

Drilling Already Stimulated

IT remains to be seen whether the new crude prices will have the effect of stimulating drilling materially in the Mid-Continent. The probabilities are that they will not have a very marked effect. The reason back of this assumption is the fact that drilling in Oklahoma already is quite active and widespread and that an intensive search for new fields has been under way for months without the added incentive of higher prices for crude. This brings up the remarkable fact that we are now approaching the first of June without a single new field having present earmarks of developing into sufficient importance to have much bearing on the crude market.

The increased crude prices come after a prolonged period during which all of the larger companies have been drawing upon stored oil to meet current requirements, and during which every effort has been made by all producing companies to find new production. This effort has been expended through drilling up of old territories, search for deeper sands underlying present producing areas, wildcatting, purchase of producing properties from other companies, and careful operation of settled leases. The net result of this is that Oklahoma production is now about 20,000 barrels a day greater than it was Jan. 1, but still 32,000 barrels less than it was last September.

At present, there are 1551 field operations actually under way in Oklahoma, of which only 90 are locations on which no actual work has been done other than driving the stake. Active drilling wells total 1015, having passed the 1000 mark this week for the first time in more than two years. There are 222 wells shut down for various causes after having done some drilling, and 224 rigs which are in various stages of preparation preliminary to the start of actual drilling. It is noteworthy that this drilling activity has been atttained in the absence of developments such as those at Burbank and Tonkawa, which together had between 200 and 300 wells drilling at one time.

No Panhandle Deluge

IT is also apparent that the Prairie Oil & Gas Co. does not anticipate a "flood" of crude from the Texas Panhandle field in the near future, else it would not be inclined to raise its prices in the face of such probability. It probably figures that whatever the Panhandle is going to do in the way of market-affecting production, it cannot be a serious factor until sufficient pipe line facilities have been provided, and that several months must necessarily elapse

Drilling Operations in Oklahoma, Kansas and North Texas

	Week Ending May 15					Week Ending May 8				
	Loc.	Rigs	Drg.	S.D.	Total	Loc.	Rigs	Drg.	S.D.	Total
OKLAHOMA										
Burbank	4	4	36	1	45	1	7	34	1	43
Other Osage	5	15	62	5	87	8	14	56	4	82
Bristow-Cushing	17	28	181	32	258	21	29	182	38	270
North Oklahoma	11	37	197	66	311	10	40	190	74	314
South Oklahoma	21	30	178	35	264	21	31	164	39	255
Muskogee	...	13	53	12	78	...	8	48	9	65
Okmulgee-Bristow	12	53	141	40	246	8	71	139	34	252
Tonkawa	1	...	7	1	9	1	...	7	1	9
Wewoka-Cromwell	19	44	160	30	253	24	34	147	27	232
Total Oklahoma	90	224	1015	222	1551	94	234	967	227	1522
KANSAS	58	113	264	99	534	74	115	244	101	534
NORTH TEXAS										
Eastland County	..	2	47	7	56	...	6	48	6	60
Stephens County	..	18	39	11	68	...	11	37	18	66
Texas Panhandle	..	77	156	17	250	...	74	140	17	231
Mexia District	..	1	1	3	5	...	...	2	2	4
E. Texas Wildcats	..	3	9	14	26	...	1	8	16	25
W. Texas Wildcats	..	89	304	71	464	...	88	282	86	456
Wichita Falls	..	59	150	36	245	...	60	159	36	255
Total N. Texas	11	249	706	159	1114	...	240	676	181	1097
GRAND TOTAL	148	586	1985	480	3199	168	589	1887	509	3153

Completions in North and Central Texas, Week Ended May 15

Archer County

Company	Well Farm	Location Survey	Depth	Initial Prod.
Burns	3-Jackson	Aldridge	1555–1572	68
Burns	4-Jackson	Aldridge	1540–1557	100
Humble	3-Wolfe	SP	1354–1362	10
Texhoma	6-Abercrombie	SP	1331–1369	180
Texhoma	7-Wolfe	Hutton	1323–1326	28
Texhoma-Republic	3-Oldham	Hubble	1062–1075	20
Trinity Trustee	3-Fee	TEL	1438–1446	50
Gulf	6-Jeske	McCory	1156–1172	80
Texas	11-Jeske	McCory	1141–1165	20
Donohoe et al	1-Anderson	TEL	870– 881	15
Magnolia	1-Little	Holeman	1270–1281	80
Wanderer	1-Wilson	Walker	T.D.1600	Dry
Burns	2-Wilson	ATNC	T.D.1656	Dry
Lincoln et al	1-Hutchinson	ATNC	T.D.1450	Dry
McDaniels et al	1-Turberville	Cain	T.D.1559	Dry
Texas	1-Key	Richardson	T.D.1821	Dry
Conden-Consol	5-Oldham	Hubble	T.D.1386	Dry
Humble	5-Wolfe	SP	T.D.1360	Dry
Independent	4-Wolfe	Poitevant	T.D.1495	Dry
Verschoyle et al	3-Young	TEL	T.D.1471	Dry
Hammond-Hines	2-Richardson	SAR	T.D.1416	Dry
Texas	12-Jeske	McCoy	T.D.1168	Dry
Bridwell-Heydrick	1-Hamilton	Holeman	T.D.1231	Dry

Baylor County

Head et al	1-Stephens	TEL	T.D.1714	Dry
Magnolia	6-Portwood	TEL	1421–1426	60

Brown County

Hughes	4-Arlege	Mitchell	1305–1327	15
Hughes	7-Arlege	Mitchell	1279–1297	160
Texas	9-Dunn	Delgado	1121–1141	150
Conway	4-Wooldridge	ET	1231–1260	20
Barbour	1-Suttles	Mitchell	1131–1138	40
Cosden	1-Williams	Coffelt	1156–1165	86
Williamson et al	1-Keller	Mitchell	1161–1180	125
States	4-Allen	Delgado	1200	Dry
Smith	11-Dunn	Delgado	T.D.1170	Dry
Rocky River	2-Newton	Swain	T.D.1365	Dry
Simms	7-Gaines	Miller	T.D.1550	Dry
Smith	1-Graham	Brown	T.D.1315	Dry
Britt	1-Windham	Mitchell	T.D.1330	Dry
Mitcham	1-Newton	Honey Cut	T.D.1400	Dry
Hutton	1-Mauldin	Mosley	T.D.1555	Dry

Calahan County

Reiter-Foster	1-Finley	BOAL	T.D.2375	Dry

Coleman County

Company	Well Farm	Location Survey	Depth	Initial Prod.
French-Lewis	2-Morris	McNeal	T.D.2778	Dry
Morrison et al	1-Young	Escher	T.D.2651	Dry
Moore et al	1-Morris	Alexander	T.D.2730	Dry
Owen-Sloan	1-Baker	Cole	T.D.2520	Dry
Rainey	1-Overall	Woolsey	T.D.1150	Dry
Havenor et al	1-Starr	ET RR	T.D.1650	Dry
Gwinnup et al	7-Dibrell	Hicks	1892–1914	50
White Eagle	1-Dibrell	Hicks	1888–1902	150

Eastland County

Corzelius et al	1-Cooper	Rohus	T.D.3345	Dry
Eastland	1-Armstrong	Van Norman	T.D.3525	Dry
Corzelius	1-Poe	H&TC	T.D.3230	Dry

Hutchinson County—Panhandle

Phillips	4-Wright	M&C	2881–2922	200

Limestone County

Yoder et al	1-Strothers	McKenzie	T.D. 841	10M

Montague County

Benton-Woods	6-Hinds	Wall	869– 880	60
Humble	1-Hynds	Wall	896– 918	80

Shackleford County

Roeser-Pendleton	4-Cook	ET	1276–1291	350
McCurdy et al	1-Walker	TEL	T.D. 842	Dry
Buckeye	1-Black	TEL	T.D. 817	Dry

Stephens County

Tex-Pac	3-Winston	TP	1920–1951	25
Gulf	9-Davis	TEL	T.D.3373	40
Gulf	30-Ward	TEL	T.D.3140	1M
Tex-Pac	64-Binney	TP	1782–1792	80

Wichita County

Consol-Rogers	1-Dutton	Denton	T.D.1865	Dry

Wilbarger County

Dyson et al	2-Waggoner	H&TC 47	T.D.2440	Dry
Humble	8-Waggoner	H&TC	1873–1890	60
Humble	9-Waggoner	H&TC	1867–1882	35
Phillips	4-Waggoner	H&TC	1861–1889	25
Phillips	1-Waggoner	H&TC	2408–2415	35

Young County

Bridwell-Heydrick	3-Beardon	Payne	1045–1062	25
Howard	2-Stewart	Young	54– 56	85
Cosa et al	1-Hoffman	Averest	T.D. 450	Dry

Completions in North Louisiana and Arkansas, Week Ended May 13

LOUISIANA

Uranina

Company	Well	Location	Depth	Yield
J. S. Abercrombie & Co.	King No. 9	25–10–1E	1544	s.w.
J. S. Abercrombie & Co.	King No. 14	25–10–1E	1547	dry aband.
Arizola Pet. Co.	Tannehill No. 5	36–10–1E	1528	200
Standard Oil Co. of La.	Urania No. 6	13–10–1E	1650	s.w.
W. H. Burkhart, trustee	Smith No. 1	26–10–1E	1559	1000
H. L. Hunt	Tullos Heirs No. 6	26–10–1E	1487	700
Nat. Gas & Fuel Corp.	H. Tullos No. 6	26–10–1E	1487	50
Nat. Gas & Fuel Corp.	Urania B-3	18–10–2E	1509	350
Standard Oil Co. of La.	Urania No. 5	13–10–1E	1530	45
George W. Weatherbee	H. Tullos No. 1	26–10–1E	1553	100
O. F. Whittaker	King No. 3	36–10–1E	1533	150
Williams Drilling Co.	Herbert No. 3	26–10–1E	1552	100

Caddo Parish—Vivian District

Dixie Oil Co. (Standard of Indiana)	Worley No. 5	43–22–15	1045	40

Caddo Parish—Caddo District

Arkansas Fuel Oil Co.	Lane No. 1	13–21–15	3614	40m. ft. gas
Dixie Oil Co. (Standard of Indiana)	Muslow Oil Co. No. 15	7–20–15	1585	15
Ohio Oil Co.	E. K. Smith No. 19	12–21–15	1615	25

Bossier Parish—Elm Grove

Palmer Corp.	Caplis No. 10	25–16–12	1555	60

DeSoto Parish—Naborton District

Texas Oil Co.	Wemple A-10	2–12–12	2450	15

Ouachita Parish

Central Co., Inc.	Cole No. 1	35–20–4E	2167	10m. gas
Palmer Corp.	Fee No. 2	24–19–4E	2220	5m. gas

East Texas—Marion County

Company	Well	Location	Depth	Yield
Tholl Oil Co.	Watt No. 2	Tucker HRS	2390	15
Trimount Pet. Co.	Mebane-Stiles No.6	N.Gupton HRS	2362	50

TEXAS

Waskom—Harrison County

C. H. Lyons et al.	Rudd et al No.1	W.R.Anderson HRS	1888	20m. gas

Panola County—Texas

Magnolia Pet. Co.	Wells No.1	John Woamck HRS	1025	6m. gas

Arkansas—Smackover

Standard Oil Co. of La.	Murphy B-8	29–15–15	2625	100
Humble O. & R. Co.	Flenniken B-3	9–16–15	2737	35m. gas
H. L. Hunt	Swilley No. 1	28–16–16	2678	75
Unity Pet. Co.	Lawton No. 2	10–16–15	2635	60
Gulf Refining Co.	F. McMullen et al No.3	1–16–16	2710	7m. gas dry aband.

Lisbon

Bond & Evans	Killgore No. 2	4–17–16	2175	65
Humble O. & R. Co.	Goodwin No. 1	16–17–16	2147	125
Humble O. & R. Co.	Slaughter No. 1	9–17–16	2115	100
Magnolia Pet. Co.	Slaughter No. 2	9–17–16	2130	400
Magnolia Pet. Co.	Slaughter No. 5	9–17–16	2135	500
Marine Oil Co.	Graham No. 1	16–17–16	2125	25
Ohio Oil Co.	Goodwin No. 1	21–17–16	2160	30
Owens et al	Slaughter No. 3	4–17–16	2135	300
J. D. Reynolds	Dumas No. 4	15–17–16	2114	25
Roxana Pet. Co.	Flournoy No. 1	4–17–16	2132	600
Simms Oil Co.	Dumas No. 3	9–17–16	2125	30
Simms Oil Co.	Perry No. 1	16–17–16	2130	10
Simms Oil Co.	Perry No. 2	16–17–16	2123	25
Simms Oil Co.	Perry No. 3	16–17–16	2105	65
Wingfield et al	Dumas A-7	9–17–16	2110	400
Wingfield et al	Slaughter No. 10	9–17–16	2095	300

before the Panhandle's status can be gauged with accuracy. In the meantime, Mid-Continent producers can continue their search for new fields with added zest and hopes of greater rewards.

This being the day of mergers, consolidations, and sales of old properties, almost each day brings with it a new rumor of some such deal impending between companies of varying importance. In most cases, it is impossible to get the facts on such deals until they have actually been consummated, so that until the final announcement is made, we must content ourselves with handing out the rumors for what they are worth.

Report Southwestern Sale

THE most recent story of a company now going through the process of selling out concerns itself with the Southwestern Petroleum Co., a strong and well-established company with production of about 6000 barrels daily. Since it became known that the Southwestern's properties were for sale, a number of major companies have checked its properties with the view of buying if the price were right. Among the companies that have done this are the Tidal Oil Co. and Carter Oil Co., but it is believed that neither of these companies are now dealing for the property. It is also reported that the Amerada Petroleum Corp. was dealing with the Southwestern. The latest and most persistent

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Mr. Walter C. Teagle, President, Standard Oil Company (N. J.), speaking before the Federal Oil Conservation Board at Washington, D. C., Feb. 10 and 11, 1926, is quoted:

(From the official record as printed by the Government Printing Office, Washington)

"Under the conditions now existing the economic tendency will be to *draw upon the whole barrel of crude instead of a part of a barrel as formerly,* for the essential uses and the essential uses for the first time in the history of the industry will now determine both the volume of the production of crude that is necessary, as well as its price.

"The result of this orderly process will be a still further husbanding of the crude supply."

(Italics used are ours)

Universal Oil Products Company
Owners of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

Completions in Oklahoma and Kansas, Week Ended May 15

OKLAHOMA

Carter County

Company	Well No.	Location	Depth	Initial Prod.
Franklin-Prairie	1	NEc NW 3-2-3W	2384–2411	140
Roxana	2	C NW NE SE 7-2-2W	2289–2318	175
Amerada	17	SWc NE NE SW 28-5-1E	T.D.1445	Dry

Cotton County

Blair et al	1	SWc NE SW 11-2-11W	T.D.2250	Dry

Creek County

Sapulpa	2	CEL SE NW 1-18-7E	2555–2570	75
Riverside	1	NEc SE SW SW 5-18-7	2385–2463	60
Gem	24	NEc SW NE 5-18-7	2560–2640	130
Tibbens	8	NWc SE SE 10-14-5	3390–3416	75
Texas	4	SEc SW SE 12-14-8	2374–2420	25
Sheridan	2	NWc 2-18-11	2206–2217	30
Devonian	1	CEL NW SE 4-18-12	2007–2018	5½M
Wilson	1	SEc SW SW26-17-10	3037–3057 OWD	3M
Ireland et al	6	C NW SE 8-17-11E	2479–2489	15
Transcontinental	3	CSL SW NE 28-17-11	1812–1877	10
Twin State	1	C NW SW SW 29-14-10	2855–871	33
Prairie	3	SEc NE NW 11-14-8	2440–2483	45
Alvard-West	2	CSL NE SW 14-17-8	2295–2349	50
Transcontinental	1	SWc 19-17-8	3585–3598	60
Barnsdall	2	NWc SW 26-17-8	3199–3211	300
Barnsdall	5	NEc SE 27-17-8	3130–3175	75
Haskell	4	NEc SE NW 12-14-8	T.D.2487	Dry
Bartlett	1	SEc NE 30-18-9	T.D.3535	Dry
Shelton	1	CEL NE NE 13-17-11	T.D.1635	Dry
Crandell et al	1	SWc NW SW 17-16-11	T.D.2912	Dry

Garfield County—Garber

Sinclair	2	SWc SE NE 13-22-4W	2502–2506 OWD	700
Sinclair	32	NEc SW NE 13-22-4	4312–4348	427
Sinclair	39	SEc NE 13-22-4	2708–2718	2580
Roxana	2	SWc NW SW 18-22-3	3119–3146	802
Roxana	3	SEc SW SW 18-22-3	3119–3146	5314
Sinclair	2	SWc NW 18-22-3	2505–2517 OWD	1362
Sinclair	22-A	NEc SW NW 18-22-3	4256–4295	400
Sinclair	28	SEc NW NW 18-22-3	2723–2746	1000
Champlin	1-A	SWc NW NW NE 21-22-3	1445–1450	1M
Prairie	11	SEc SE 12-22-4	4495–4607	225
Mid-Cont Pet et al	6	SEc NE SE SE	T.D.1920 OWD	Dry

Grady County

Magnolia	2	C NE SW 35-5-8W	2152–2365	25M
Hall-Briscoe	2	C SW NE 11-4-8	2126–2200	38M
Carter	1	C SE NE 34-5-8W	T.D.2975	Dry

Hughes County

Ramsey	2	NWc NE SE 19-8-10	3470–3478	25
Dixie	1	NEc 5-7-8	4455–4471 OWD	2181

Kay County—N. Braman

Comar	13	NWc SW SW 21-29-1W	2064–2088	120
Harris-Hahn	1	C SE SE NE 17-29-1	3350–3390	90

Kay County

Harris-Hahn	2	NEc 8-27-1W	3455–3458	90
Blackwell	6	C NW SE 9-27-1	3430–3438	13M
Marland	5	NEc NW NE NE 12-26-2W	2952–2958	50
Souligny et al	1	NEc NW 16-26-3E	T.D.3958	Dry
O'Kansas	1	C NW NW NE 14-25-1E	T.D.4287	Dry

Kay County—S. Braman

Moore et al	1	SEc NE 31-28-1W	T.D.3617	Dry

Kay County—Thomas

Marland	7	SWc NW SW 15-25-2W	2570–2580	4M
Marland	8	NWc NE SW SW 15-25-2	1180–1190	6M

Lincoln County—Davenport

Mid-Cont	3	NWc SW NW 8-15-6	3993–4008	1620
Mid-Cont	4	NEc SW NW 8-15-6	4073–4076	1005
Phillips	4	NEc SW NE 10-14-5	3390–3416	75

Lincoln County

Tidal	6	NEc NW 22-17-7	2852–2859 OWD	87
Wilson	1	SWc NE 20-17-6	T.D.3758	Dry
Amerada-Marland	1	NWc SE 36-15-5	T.D.3418	Dry
Mid-Kans	1½	SWc NW 36-15-5	T.D.4360	Dry
Wentz	1	SWc 36-15-5	T.D.4658	Dry

Logan County

Donahue et al	1	NWc SE 21-18-2W	T.D.3501	Dry

Marshall County

United 8	5	SEc SW SE SE 24-5-5	T.D. 660	Dry

Muskogee County

Johnson	2	SEc NW NE 30-14-19	T.D.2121	Dry

Okfuskee County

Gilcrease	1	SEc NE 35-11-9	3150–3175 OWD	207
Empire	1	NWc 30-11-10	3179–3180 OWD	13M
Champlin	6	C NE SE NW 22-11-11	2612–2636	150

Okmulgee County

Hutchinson et al	2	NEc NW NE 34-16-13	1823–1900	12
Pine et al	2	SWc SE SE 25-14-12	1201–1242	3M
Denver P & R	6	NEc SW NE 32-13-11	3064–3085	27M
Marcey	5	CEL SE NW 8-13-12	2901–2932	12
Pine	1	NWc 10-15-14	1538–1559	50

Company	Well No.	Location	Depth	Initial Prod.
Simms	13	C NE SW 15-13-14	2441–2452	400
Darby et al	2	CNL NE NE 35-15-12	T.D.2754	Dry
Gray	1	NWc NE SE 14-14-12	T.D.2596	Dry
Kirkland	3	C SE 17-15-13	T.D.2542	Dry

Osage County—Burbank

Phillips	13	NWc SE 2-27-5	2923–2982	1000
Skelly	8	NWc NE NW 2-27-5	2950–2994	220

Osage County

Wah-Sha-She	52	SWc 15-29-9	1552–1578	35
Owen Osage	362	C S½ SE 7-27-11	1935–1955	¾M
Harland	82	NWc SE SW 19-25-11	1690–1792	5
Texas	1	NEc NW NW NE 13-24-8	2640–2651	100, 16M
Tidal	3	NWc SE SW 24-24-8	2146–2174	25
Amerada	19	SW NE SE 16-22-9	2160–2217	150
Barnsdall	1	SEc SW 18-21-9	2268–2305	10
Westland	2	NW NE SE 29-20-12	1932–2047	10
Arthur	24	NE NW SE 5-25-12	T.D.1726	Dry
Mitchell et al	1	SWc NW SW NW 7-21-9	T.D.2371	Dry

Pawnee County

Westerly	5	SWc NW SW 22-20-6	3350–3386	58
S. W	19	NWc SE NW 24-20-8	1120–1140	15
Prairie	8	SEc NW 10-20-8	2415–2450	18
Bu-Vi-Bar	1	NWc 31-22-27	T.D.3230	Dry
Watchorn	1	SWc NE 33-23-3	T.D.4508 OWD	Dry

Payne County

Olean	2	SWc NW NW 24-19-4	3743–3745	240
Olean	3	NEc NW NW 24-19-4	3720–3737	1668
Magnolia	4	NWc NE NE NE 6-17-4	3530–3570	20M
Home Gas	1	NWc 30-18-6	T.D.3830	Dry

Seminole County

Indep. et al	1	CWL 5-7-8E	4171–4185	1850
Magnolia	5	CWL SW NW 5-7-8	4180–4193	2150
Dixie	1	NEc NW NE 6-7-8	T.D.3225 OWD	Dry

Stephens County

Magnolia	1	NEc NW SE 22-1-9W	T.D.2339	Dry
Continental	1	SEc NE NE 11-3-9W	T.D.2510	Dry
Burris-Stahl	1	C NE SW 33-3-6W	T.D.3506	Dry

Tulsa County

Leathers et al	1	NEc NW SE 22-18-12	968– 992	5
Ellen	1	NEc 25-18-14	1266–1285	15
Prairie	4	SW SW SE 35-22-12	1445–1460 OWD	½M
Sparks et al	1	NEc SW 27-17-14	T.D.1630	Dry
Fusselman	1	CNL SW NE 28-19-11	T.D.1260	Dry

Wagoner County

Marr	2	SE NW NW SE 29-18-16	765– 786	25

KANSAS

Butler County

Empire	31	SEc NW SE SW 29-25-5	665– 683	10
Empire	31	SWc NE SW SE 29-25-5	638– 660	10
Empire	9	C NW SE SE 35-27-4	2545–2552	175
Allinson et al	1	C SE SE NW 3-28-6	3054–3058	380
Manhattan	1	SEc 28-27-7	2712–2751	150
Dixie	2	SWc SE SW 27-27-7	T.D.2808	Dry

Coffey County

Bucher et al	1	SEc 1-20-14E	T.D.1760	Dry

Cowley County

Roxana	2	C SW SW SE 16-34-3	T.D.3442	Dry
Benedum-Trees	5	C SE NW SE 10-31-3	3040–3058	27
Gypsy	8	C NW SE NW 24-32-4	2980–3046	144
Forrester et al	1	NWc NE 4-33-7	1950–1990	20

Greenwood County

Titus et al	20	SEc SW SE NW 29-22-10	2320–2370	150
Titus et al	3	C E½ E½ NE 30-22-10	2450–2489	135
Phillips	1	C SW NW SW 5-22-12	1850–1897	20
Hayes et al	11	C SE NW NE 25-23-8	2537–2558	50
Hayes et al	12	C NE SW NE 25-23-8	2560–2600	150
Skelly	3	C NE NW NW 1-23-9	2430–2452	65
Skelly	2	C NE NE NE 15-23-9	2302–2438	200
Empire	4	C NE SW NE 19-23-9	2520–2553	25
Manhattan	6	C SE SW SW 19-23-9	2595–2614	40
Roth-Faurot	1	NWc 15-23-10	2169–2182	25
Pure	7	CWL NW 26-23-10	2245–2293	20
Kinney	7	SEc NE SE NW 10-26-8	2436–2461	30
Simmons et al	1	C NW NE SW 28-22-12	T.D.1955	Dry
Davis et al	1	SWc SE SE NE 17-24-13	1467	Dry
Miller et al	1	NEc SE 13-26-8	T.D.2336	Dry

Lyon County

Abel et al	1	NWc SW NW 32-19-11	T.D.2133	Dry
Ritchey-Moore	6	C SE SW 34-21-10	T.D.2275	Dry
Phillips	1	SWc SE 33-21-12	T.D.1917	Dry

Marion County

Nat'l Ref	3	C SE NE 17-21-4	T.D.3171	Dry
Troup et al	1	NEc SW 8-19-4	T.D.2366	4M

Russell County

Johnson	7	C SE NE SW 5-12-15W	2808–2813	100
Mid-West	16	C SE NW NW 8-12-15	2915–2968	95
Mid-West	18	C SW NW NW 8-12-15	2910–2959	150

(Continued from page 58)

rumor, however, has it that The Texas Co. has bought the property.

Officials of the Southwestern now in Tulsa believe that the company has been sold, but do not know to whom nor for what price. D. F. McMahon, general manager, is now in New York, and is believed to be closing up final details of the sale. It is likely that announcement will be made early next week. Acquisition of this company probably entails the expenditure of at least ten million dollars. The Southwestern is an outgrowth of the old Gunsburg & Forman partnership, names well known throughout the Mid-Continent field. George Forman, of Buffalo, who died about a year ago while on board ship, willed a large portion of his stock in the company to its employes, in varying amounts according to length of service, and many of them now will reap rich rewards as a result of his generosity.

Gas Showing in Texas County

SMARTING under the publicity given the Texas Panhandle, causing many people to forget entirely that Oklahoma has a Panhandle, too, the latter region is making its bid for the spotlight this week. A well in Texas county, in a location about 65 miles north of production in the Hutchinson county, Tex., field, is making between six and eight million cubic feet of gas in sandy lime from 2692 to 2700 feet. It is the H. F. Wilcox Oil & Gas Co. No. 1 Hovey, in the SEc of 21-4N-14E, about 10 miles north of Guymon, the county seat.

The well had its first showing of gas, which was for about 50,000 cubic feet, at 2570 feet. It then had about a million and a half feet of gas from 2665 to 2670 feet. Further drilling brought the amount of gas mentioned in the foregoing paragraph. There are seven other wells drilling in this county, and the entire county has been quite thoroughly leased up, principally by the large companies. The leasing has been done both in large blocks and in checkerboarding. M. M. Valerius, geologist, who discovered the Russell county, Kans., field, and who is an inveterate wildcatter, is heavily interested in Texas county acreage and is drilling a well.

More Big Garber Wells

THE Garber field continued to increase in production the past week, going up 3910 barrels to a daily average of 43,620 barrels. Several good wells in the Layton and Tonkawa sands were brought in during the week by the Sinclair and Roxana companies. Sinclair Oil & Gas Co. got its first Layton sand well on the famous Hartley lease when it drilled in its No. 31, in the SWc NW of 18-22-3W. This well had the Layton sand from 3670 to 3690 feet and made 1550 barrels in the first 20 hours after drilling in.

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An Associate Company of the American Chain Co. Inc.
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TRANSIT PUMPS
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NATIONAL TRANSIT PUMP & MACHINE CO.
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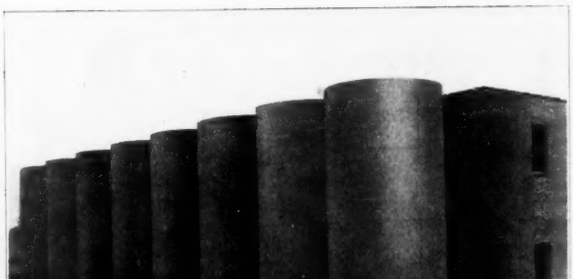
Everything in Oil Storage

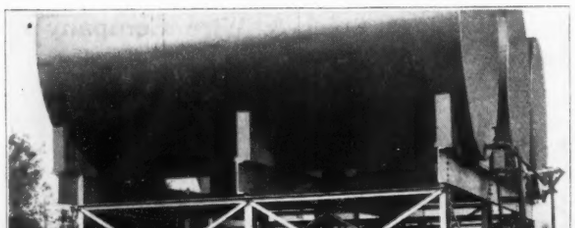
Field Erected Tanks

Horizontal (Above-Ground) Tanks

Underwriter's Underground



Vertical (Above-Ground Tanks)



Tanks Supports

Small Welded Tanks

GRAVER *Founded 1857* ***Corporation***

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TULSA

Capitol National Bank
LANSING, MICH

West Bldg.
HOUSTON

Box 1008
CEDAR RAPIDS, IA.

GRAVER builds these sizes

Field Erected Tanks

SIZE	CAPACITY GALLONS	BARRELS	WEIGHT
15'9" x 21' 3¾"	31061	740	14160 #
21' x 9' 8¾"	25208	600	13500 #
21' x 19' ¾"	49434	1177	19000 #
26'3" x 9' 9"	39472	940	18700 #
26'3" x 17' 7"	21185	1695	24200 #
26'3" x 23' 5"	94803	2257	28700 #
26'3" x 24'11"	100874	2402	30000 #
36'9" x 27' 3"	216220	5148	51650 #
47'3" x 32' 1"	420832	10020	82800 #
63' x 27' 3½"	636400	15162	116600 #
78'9" x 29' 5¼"	1072535	25538	196200 #
94'6" x 30' 4½"	1593600	31944	288000 #
117'2½" x 29' 5¾"	2367100	56360	400000 #
117'2¼" x 41'10"	3363100	80075	571000 #

Also built in 18 intermediate sizes.

Underwriter's Underground

SIZE	CAPACITY IN GALLONS	WEIGHT
8' x 27'10"	10400	14500 #
8' x 32'	12000	16100 #
8' x 39'11"	15000	19600 #
10' 6" x 17'10"	11500	13400 #
10' 6" x 23' 8"	15300	16800 #
10'16" x 29' 6"	19100	20200 #
10' 6" x 35' 4"	22900	23600 #
10' 6" x 41' 2"	26600	26900 #
10' 6" x 47'	30400	30000 #

Weights given are for ⅜" shell and heads. Also built with $\frac{5}{16}$" shell and heads. Girth seams single riveted. Longitudinal seams double riveted. ⅝" rivets will be on the $\frac{5}{16}$" tanks. ¾" rivets on the ⅜" tanks. All tanks to have one piece flat heads.

Small Welded

SIZE	CAPACITY IN GALLONS	WEIGHT
4' x 6'	500	800 #
5'5" x 6'	1000	1200 #
4' x 11'	1000	1300 #
5'5" x 9'	1500	1600 #
4' x 16'2"	1500	1800 #
5'5" x 12'	2000	2100 #
5'5" x 15'	2500	2400 #
5'5" x 18'	3000	2900 #
5'5" x 21'	3500	3400 #
5'5" x 24'	4000	3800 #
5'4" x 30'	5000	6200 #

All sizes built of $\frac{1}{4}$" steel plate throughout, except the 5000 gallon size, which is built of ¼" plate throughout.

Horizontal (Above-Ground)

SIZE	CAPACITY IN GALLONS	WEIGHT
8' x 10'11"	4075	4500 #
8' x 13' 6"	5050	5300 #
8' x 16' 3"	6075	6100 #
8' x 18'10"	7050	6900 #
8' x 21' 7"	8075	7600 #
8' x 24' 2"	9050	8400 #
8' x 26'11"	10075	9100 #
8' x 29' 6"	11050	9900 #
8' x 32' 3"	12075	10700 #
8' x 34'10"	12050	11500 #
8' x 37' 7"	14075	12300 #
8' x 40' 2"	15050	13000 #
8' x 42'11"	16075	13800 #
10'6" x 11'11"	7700	6600 #
10'6" x 15' 7"	10000	8100 #
10'6" x 17' 9"	11500	8800 #
10'6" x 20' 7"	13350	9900 #
10'6" x 23' 7"	15200	11000 #
10'6" x 26' 5"	17100	12000 #
10'6" x 29' 5"	19000	13200 #
10'6" x 32' 3"	20900	14200 #
10'6" x 35' 3"	22800	15300 #
10'6" x 38' 1"	24600	16400 #
10'6" x 41' 1"	26400	17400 #
10'6" x 46'11"	30300	19600 #

Built in both $\frac{3}{16}$" and ¼" shell with ¼" heads. The weights given are for ¼" heads and shell. Heads of one piece construction.

Vertical (Above-Ground)

SIZE	CAPACITY IN GALLONS	WEIGHT
10'6" x 10'10"	7000	4900 #
10'6" x 12' 7"	8100	5400 #
10'6" x 15' 7"	10000	6200 #
10'6" x 17' 7"	11300	6700 #
10'6" x 18' 4"	11854	6900 #
10'6" x 19' 1"	12300	7100 #
10'6" x 20' 4"	13100	7500 #
10'6" x 22' 1"	14200	8000 #
10'6" x 23' 4"	15000	8300 #
10'6" x 24'10"	16000	8700 #
10'6" x 26' 2"	16800	9100 #
10'6" x 28' 2"	18100	9800 #
10'6" x 29'11"	19300	10100 #
10'6" x 31' 5"	20200	10700 #

All tanks constructed with heavy ¼", one-piece bottom, $\frac{5}{16}$" shell and $\frac{1}{16}$" top. Heavier shell plates if desired.

Types of GRAVER Construction

RIOW—Riveted, and Inside and Outside Welded. A continuous weld doubly seals each joint.

Riveted and Caulked—The oldest and best known steel plate construction.

ROW—Riveted, and Outside Welded. A very serviceable construction for ordinary use.

GRAVER Corporation Founded 1857

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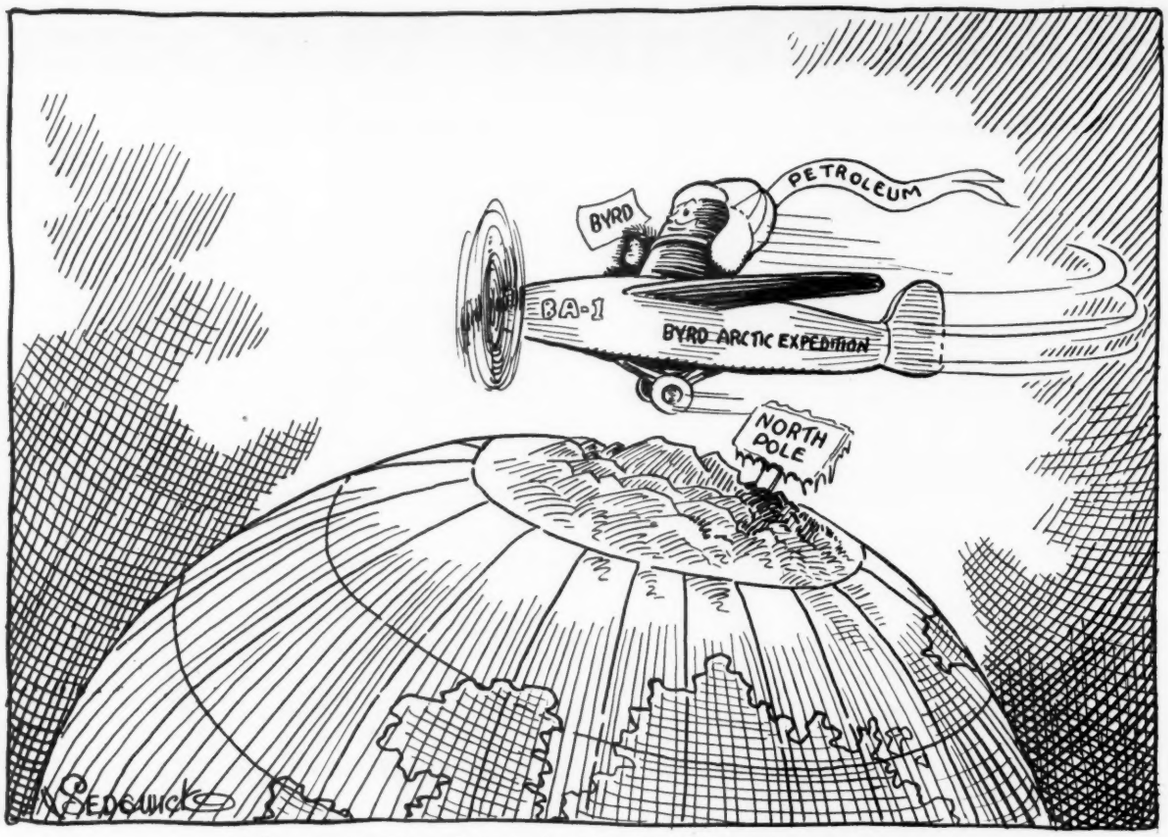


PETROLEUM, THE REAL CONQUEROR OF THE NORTH POLE

Wildcat Blocks Taken Up In Louisiana

Staff Special

HOUSTON, May 13.—An acreage play extending a distance of between 50 and 60 miles, northeasterly across central Louisiana, follows approximately the line of outcrop of the St. Maurice beds. It courses the Angelina-Caldwell flexure, on which is located the Urania field of La Salle parish, Louisiana, and the old Nacogdoches development of eastern Texas, but geological information on the territory is generally indefinite.

Several hundred thousand acres of leaseholds have been taken up, generally in consideration of drilling obligations; although some bonuses have been paid for acreage. Most of the land is owned in fee by the large lumber companies.

J. E. Smitherman and E. G. Palmer of Shreveport, who discovered the Haynesville field, in Claiborne parish, have agreed to drill 31 test wells in five years on a 65,000 acre block near Jena, in La Salle parish; Humble Oil & Refining Co. has taken up approximately 80,000 acres extending from near Georgetown, in Grant parish, southwesterly to the center of Natchitoches parish; Louisiana Oil Refining Corp., has 17,000 acres near the town of Montgomery, in Grant parish; J. B. Greer of Shreveport has taken up about 7000 acres in southern Sabine parish; and R. E. Davidson leased approximately 20,000 acres near the town of Weaver, Natchitoches parish, three-fourths of which block is said to be owned with him by the Humble Oil & Refining Co.

New Big Flank Well In At Spindletop

HOUSTON, May 13.—Yount-Lee Oil Co.'s No. 5 McFaddin well, on the south flank of the Spindletop salt dome, is a current week's completion for 5500 barrels, initial production, of 22 gravity lubricant crude at depth of about 2500 feet.

Earlier flank wells on the south side of Spindletop, which have been coming in since last fall, had declined to approximately 750 barrels combined daily production before completion of the No. 5 McFaddin. They included No. 4, which produced several thousand barrels daily of 28 gravity oil at total depth of 3518 feet for a few days; No. 3 which made initial production of 4500 barrels of 23.4 gravity oil at 2779 feet; No. 2, initial production 700 barrels of 28 gravity oil at 2588 feet; and No. 3 Gladys townsite, on the southwest flank of the dome, which originally made 3000 barrels of 18 gravity oil, but quickly declined to 450 barrels net oil accompanied by 85 per cent water.

43 Vapor Phase Treating Units In Use

NEW YORK—Gray Processes Corp., Newark, N. J., announces that 43 units of its equipment for treating cracked gasoline in the vapor phase have been installed or contracted for by the following companies: Argentine Government Oil Fields, La Plata, Argentina; Barnsdall Refineries Inc., Barnsdall, Okla.; Barnsdall Refineries Inc., Oknulgee, Okla.; Compagnie Belge du Gaz Catalytique, Brussels, Belgium; Kanotex Refining Co., Arkansas City, Kan.; Lubrite Refining Co., St. Louis; Marland Refining Co., Ponca City, Okla.; McColl Bros., Ltd., Toronto, Ont.; Standard Oil Co. of New York, Brooklyn; Sun Oil Co., Marcus Hook, Pa. and White Star Refining Co., Wood River, Ill.

The first unit was installed in the Barnsdall, Okla., plant of the Barnsdall Refineries Inc., in October, 1924, and its operation was described in National Petroleum News shortly after that time.

New Jobber to Build Stations

SALEM, O.—The Arrow Gasoline Co., with general offices here, has been incorporated for $100,000 to do an oil jobbing and marketing business. Plans are to operate a number of filling stations.

Officers are: T. E. Chambers, of Salem and New Castle, president; Virgil L Battin, Salem, vice president and general manager; R. H. Chambers, New Castle, secretary and treasurer; C. R. Birney and Robert Slater, Carrollton, directors in addition to the officers.

A banquet for stockholders and agents was held recently at the Elks home here.

The Editor's Viewpoint

National Petroleum News

New Thought On Motor Oil

A NEW thought—at least that is our recollection—on the right oil for automobile lubrication is given by Robert E. Wilson, assistant director of research and Robert E. Wilkin, of the engine laboratory, of the Standard of Indiana. (See pages 41 to 49 inclusive, March 17 issue N. P. N.) These two research men develop the theory that, after a certain point has been reached, the diluent in the oil is held to a definite amount by the action of the engine therefore they argue, the oil can be better diluted in a scientific manner by the oil companies in the first place. They submit data from many tests in support of their theory.

The theory may tend to upset former ideas of lubrication and may provoke much discussion within the industry. However such discussion may turn out, the theory and data show a keener knowledge of what goes on in an automobile engine as well as proof that the oil industry is searching further and, one might say, more ruthlessly, for the facts in its effort to render the best service to the public.

One refinery expert some time ago observed to the writer that, so far as his casual testing of the contents of the crankcase of his own car went, it seemed to him that no matter what oil or whose oil he put in, within 50 to 75 miles it had turned to "a good grade of gas oil" which "new product" seemed to run the car most satisfactorily for many hundreds of miles thereafter.

If it is "gas oil" that automobiles are actually getting their lubrication from then the question before the oil industry is how to make the best "gas oil" possible and for the automobile engineers, how to make engines that won't manufacture "gas oil" out of perfectly good lubricating oil.—W. C. P.

Price Cutters In Other Trades

A FAMOUS lawyer dubbed a famous retail merchant the other day, "The Prince of Price Cutters." It was sacrilegious. This merchant is literally worshipped by the retail business and he looms large in the affairs of the Chamber of Commerce, and the lawyer added this merchant is lead- the opposition to any kind of legislation which might help a manufacturer to have something to say about what a dealer shall sell his goods for.

After hearing this new title to this otherwise estimable merchant, I couldn't help but wonder at who are the worst price cutters in this country. Undoubtedly they are the retail merchants, and the bigger they are the worse price cutters they are. Study the advertisements of even the "best and most exclusive" stores and see if the chief cry is not price?

Of course these merchants—these "members of the house of price cutters" tell how they stand between the public and the poor workingman on the one hand and the "grasping" manufacturer on the other; that they are constantly fighting to keep down the cost of living. And the workingman seems to believe these "Princes of Price Cutters", without appreciating that these "Princes" are doing all they can to demoralize the markets and the prices of the maufacturers so they are less able to pay the workingmen the wages they want.

All this has to do with the oil business in just this thought —possibly the oil business hasn't so many or such bad price cutters as many other businesses; possibly the oil industry is a bit too honest and frank, maybe even brutal, in describing a price cutter. Certain it is that, if this famous "Prince of Price Cutters"—this national figure of retail merchandising, were to operate in the oil business the way he seems to operate in his own business, the rest of the oil industry would not bow down in reverence to him, nor make such a respectable national figure of him as his present associates and competitors do.

Nor would the oil industry have the same restraint that this attorney had who dubbed him a royal title for price cutting. Oil language would be stronger and more expressive of disgust, distrust, lack of respect, etc., than "prince."

And just one more thought in this connection with oil—hasn't the retail trade gotten away with an astounding amount of price cutting, which it has called "good merchandising" and thereby falsely advertised itself and warped the public's thinking. The retail trade has pointed to itself as the last word in "selling", and yet has it not been price cutting more than good selling that is responsible for its success, that and grinding down the manufacturers from whom the retailers buy, to the very last cent?

Perhaps the oil industry has been a bit too loud in its advertising of price cutting, within the industry. Perhaps we should explain to outsiders that the oil industry has a much higher standard of merchandising, than the retail trade, and that we look upon even the "Prince of Price Cutters" as being in the same much despised and be-damned category as the oil price cutters.—W. C. P.

A Man To Be Envied

BILL LONG, oil field operator and poet who died recently in Tulsa, was a man to be envied above most, for he carried throughout life an ideal in his heart that never became tarnished. That ideal was an image of the oil industry that too few of us have ever visioned. It was an inspiration that Bill Long strove to carry to others through that winged vehicle of the imagination, poetry.

His poetry was ofttimes limping, compared with the free flowing grace of the masters. In fact it is easy to picture Bill Long, his head in his hands in despair at the weakness of his own effort to give the outside world something of the brightness and clearness of the vision he carried in his own heart. But to the extent, and it was in good measure too, that he succeeded in picturing the glorious pioneering spirit of the oil producing industry, he will be remembered for his poems long after he is forgotten as a producer and dealer in oil field supplies.

With too many of us in the oil business, the ideal of the industry we set up in the time of our early acquaintance with it has become soiled and tarnished through the contact of worrisome details of everyday affairs. Down in our hearts we can still respond to a thrill at the rugged strength, the great growth and the service to mankind of the industry of which we are a small part; but the occasion comes but seldom that calls forth that thrill, that rubs the tarnish from the image for even a brief moment.

With Bill Long the image was always bright and certainly he was happier through life for such an ideal of the industry in which he had cast his lot.—V. B. G.

Fortify for Fire Fighting

Because they are usually beyond the protection of city fire departments, oil refineries and other property of oil producing and storing companies, are doubly in need of fire protection.

Every plant fire chief knows that the only way to extinguish a fire in volatile liquids or inflammable substances, is to smother the flame.

That is what **PHOMENE** does.

No inflammable substance can burn when covered with a blanket of **PHOMENE** foam—a mass of durable foam bubbles filled with carbon dioxide gas. This foam floats on the surface of burning liquids and coats the surface of solids—cutting off the oxygen and extinguishing the fire.

PHOMENE (Foam Type) 2½ Gallon Extinguishers and 40 Gallon Engines are effective on all classes of fires, especially oil, gasoline, naphtha, enamel, tar, wax, grease, shellac, lacquers, inflammable solvents and chemicals. *Our new two unit foam charge in powdered form is convenient.* Wherever quantities of materials of an oily or highly inflammable character are manufactured, used or stored, these devices are best to install. *They prevent small fires from becoming big ones.*

Equip your trucks with 1 quart or 1½ quart Improved **PYRENE** Extinguishers.

Demonstrations arranged—any time—anywhere.

Phomene
(Foam Type)
2½ Gallon
Extinguisher

The Pyrene Manufacturing Co.
Newark, N. J.

Type D-3 P Outdoor or Yard
40 Gallon Engine

OUR attention has been called to the announcement of Messrs. Winkler and Koch in the May 5th issue of the National Petroleum News, in which they offer to license Cross Cracking Units.

We take this means of advising the Refining Industry that Messrs. Winkler and Koch have no connection with this Company.

Gasoline Products Company, Inc.

Sole Owners of the Cross Cracking Patents

52 Broadway, New York, N. Y.

Develop Cheap, Efficient Method of Restoring Absorbent Charcoal

By Paul Truesdell
N. P. N. Staff Writer

PITTSBURGH

A SIMPLE, cheap and efficient method of rejuvenating and partially reactivating periodically the charcoal used in its absorbers and thereby increasing the yield of gasoline from the gas it handles by about 50 per cent, has been worked out at the charcoal absorption plant of the Burrell Oil & Gasoline Co., at Claysville, Pa., 40 miles from Pittsburgh.

The treating of the charcoal is done with superheated steam in an ingenious little outfit that was developed by Col. George A. Burrell, head of the company, R. P. Mase, his associate and K. C. Waldo, superintendent of the plant. It was built according to their designs and under their constant supervision. The method and equipment now in use for reactivating the charcoal represents the second attempt of the plant operators to work out such a system. The first treating plant, while it produced the desired results, was unsatisfactory from an operating standpoint.

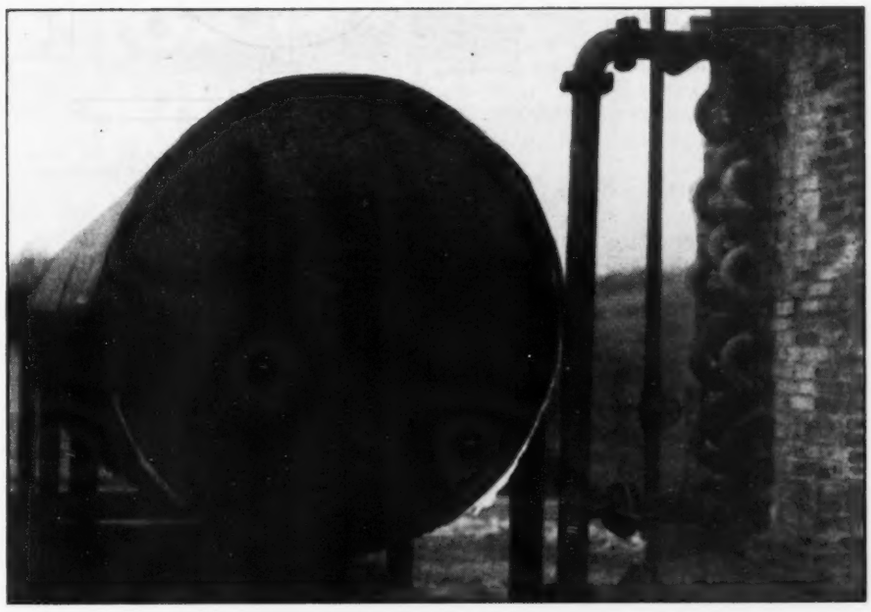
Before describing the method used in treating the charcoal and the equipment for doing it, the conditions under which the absorption plant operates should be stated. Instead of drawing raw casinghead or dry well gas direct from the field, the source of supply of this plant is largely the natural gas on its way to supply the industrial and domestic fuel users of Pittsburgh after it has been denuded of its gasoline to the limit of their ability by oil absorption plants. There is, however, a small amount of gas coming to the plant direct from the field.

So the Burrell plant has lean pickings as compared with those operating on virgin gas coming in from the leases.

While many gas companies have charcoal plants of their own to strip the last drops of gasoline from the gas after the oil absorption plants have done their stuff, this is the first Independent company we have heard of organized to make a living off what the absorption plants leave in the gas. There may be others, however.

Profits Basis of Payment

BUT the Burrell plant has an advantage, too, in one way over the average gasoline plant operator. While the latter has to take the gas continuously from the wells to which he is connected and whether he is making or losing money must pay the producer either a flat rate per 1000 feet or on the basis of a percentage of the fluctuating gasoline tank wagon market in Chicago or somewhere else, the Burrell company pays for its gas on the basis of a stated percentage of its profits. Hence, no profits, no pay for the gas.



On right, one end of the furnace with the return bends of the steam coils. At left, the tank in which the charcoal is subjected to superheated steam to restore its absorptive capacity. Burrell Oil & Gas Co. plant, Claysville, Pa.

Before entering into such an enterprise, naturally, Colonel Burrell and Mr. Mase studied the whole subject thoroughly and made many painstaking tests to determine what volume of gas they could expect and what yield of gasoline they could obtain from it.

Their tests showed them that the volume of gas coming through the line fluctuated widely, ranging from 15,000,000 to 45,000,000 cubic feet a day. The gasoline content also varied widely, ranging from 80 to 200 gallons of gasoline per million cubic feet. They figured 30,000,000 cubic feet of gas as a safe daily average to depend on and a gasoline yield of 4000 to 5000 gallons a day.

The charcoal plant was built during the fall of 1923. It consists of three 6x30 foot horizontal absorbers, high and low stage compressors, water cooling tower, gas cooling coils with spray equipment, the necessary condenser and storage tanks and a boiler plant comprising two 100-horsepower Brownell return tubular boilers, the brick settings of which were enclosed in sheet steel jackets to prevent air leaks in the settings.

MR. MASE believes that placing the absorbers in a horizontal instead of a vertical position was done for the first time at this plant and it has since become general practice. The absorbers were built to operate under 200 pounds pressure, the pressure in the line varying from 150 to 200 pounds.

The plant began operation in December, 1923. It was early apparent that it was not getting the yield of gasoline that had been counted on. This was not wholly unexpected because the operators in the first place had tried the experiment of filling the absorbers only about two-thirds full of charcoal. The absorbers were designed to hold 17,000 pounds each and only 12,000 pounds each had been put in. The charcoal originally put in was 8-14 mesh, all that has since been bought is 14-24 mesh.

In the effort to bring up the yield, the absorbers were filled to capacity. This was successful temporarily.

In the early fall and winter, however, the yield began to fall off again and by December, 1924, it was very low. The operators decided that the charcoal was being rapidly contaminated and its absorptive power impaired. While they were feeling around for the answer to their problem the idea was hit upon that if the gas were heated before going into the absorbers, the yield would be increased. This was tried out, the gas being passed through steam coils and brought to a temperature of about 140 F. This increased the yield by about 20 per cent but still it was felt that it was not the real solution.

Both Colonel Burrell and Mr. Mase had had much experience with ab-

sorbent charcoal during the war. They knew how the activating of charcoal in the first place is done by subjecting it to the action of superheated steam at a very high temperature and they decided that the way to reactivate it, at least partly, was to subject it to a similar superheated steam treatment. After trying the idea out on a small scale in the laboratory they got a tank the same size as the absorbers and mounted it horizontally. They had two calorized pipe superheaters around the plant that were not in use. These they placed under the tank and bricked up a furnace like that of a still. They led a perforated header, connected with the superheater, along inside the bottom of the tank.

They took the charcoal out of one of the absorbers, placed it in the tank, connected up the superheater with the main steam line from the boiler house, lighted the gas burners in the furnace under the tank and let it go. They were afraid the bottom of the tank would not stand the tremendous heat of the combination of superheated steam and fire directly underneath.

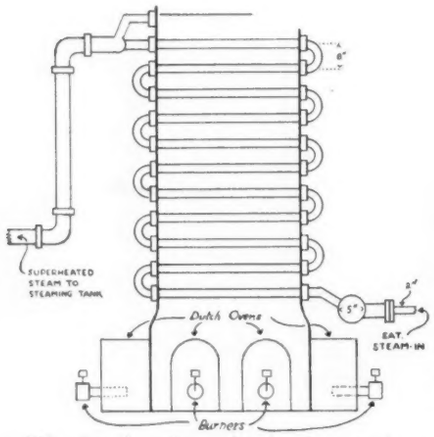
Mr. Mase and Mr. Waldo spent anxious days and nights watching the steaming outfit lest the fire sheet of the tank buckle and drop the charcoal into the fire. Charcoal is expensive.

The experiment showed them that they were on the right track. The charcoal after the treatment was replaced in the absorber and the yield of that absorber was increased by 50 per cent or more. The steaming tank stood up for only six or seven treatments. Then it was abandoned and Mr. Mase and Mr. Waldo set about designing a more efficient steaming plant. The plant they are using successfully now is the result.

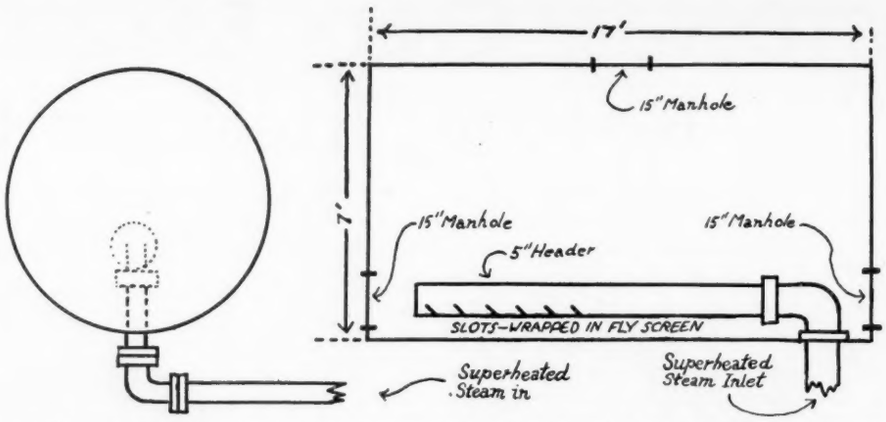
The Superheating Furnace

IN the first place, in designing the superheating furnace, they wanted to get away from the necessity of building an expensive stack to provide the proper draft. This problem was solved by designing a special gas burner which is shown in an accompanying sketch.

The idea was to send the gas to the burners under pressure, thus making the gas instead of the air, furnish the draft.



Side elevation of superheating furnace showing arrangement of steam coils.



Side and front elevations of the steaming tank at the Burrell plant, showing arrangement of intake line and steam header inside tank.

The pressure in the main gas line, as before stated, runs between 150 and 200 pounds. On the fuel line leading off the gas for use under the boilers are three reducing valves. The first valve cuts down the pressure to between 60 and 75 pounds, the second to about 10 or 15 pounds and the third to about eight ounces, suitable for feeding the boiler furnace burners.

The line to furnish gas for the superheater was tapped into the fuel line between the second and third reducing valves which provided gas at between 7 and 15 pounds pressure, averaging about 10 pounds.

The gas burner consists of a piece of five-inch pipe from a foot to 16 inches long. Both ends of the pipe are open but to the outward end is screwed a tee. Through the side opening of the tee a one-inch pipe is led through a bushing. This one-inch pipe, which is the gas inlet, runs to the center of the larger pipe where it turns and runs parallel with the larger pipe.

Gas Suction Draws In Air

ON the end of the small pipe is screwed a cap which is drilled with six holes as shown in the sketch. The center hole is one-eighth inch and the five surrounding holes are one-sixteenth inch. The gas flowing under pressure through the one-inch pipe and into the furnace, acts as an aspirator, siphoning in air through the open end of the five-inch pipe.

It is only necessary to block up the open end of the big pipe with pieces of brick until just the right amount of air is being admitted. The burner burns like a blow torch.

The superheater furnace, the design of which is Mr. Waldo's, is built of brick and lined with fire brick. It is about 10 feet high and 10 feet long. It is built along the lines of the chimneys built by our ancestors for their homes, wider at the bottom and drawn in above.

Six Dutch oven furnaces are built into the chimney at the bottom, two on each side and one at each end. In each of these Dutch ovens is one of the specially designed burners just described. The Dutch ovens are staggered and the burners are set in at an angle so that the flames of no two burners impinge to make a hot spot which would quickly burn out the tubes. In addition, the flames from the burners are further deflected from each other by checkerwork inside the main combustion chamber

The Superheater Coils

ABOVE the combustion chamber is the superheater. This consists of three pipe coils in parallel of extra heavy two-inch steel pipe. The coils are about 10 feet long with eight feet three inches exposed to the fire and each coil consists of 11 runs. At the ends, the coils are connected by means of extra heavy forged steel return bends such as are used in ammonia piping and these return bends project out through the walls of the furnace making it easy to remove them and replace tubes whenever necessary.

At the bottom end, which is the steam inlet end, the three coils are welded into a five-inch header connected with the steam line from the boiler house. The coils are eight inches apart, center to center, and the middle one is four inches above center of the other two. In making this arrangement it was the idea of Mr. Waldo to place the middle coil so the heat reaching it would be more nearly equal to the heat reaching the outer two coils and also to bring the return bends into such position that it would be easy to use a wrench on all of them. Photograph herewith shows one end of the furnace with the return bends of the coils and the steaming tank beside it.

The top ends of the coils are welded into another header which is connected with the line leading into the steaming tank.

"Please be sure to tell in your story why we lead the steam into the bottom of the superheater and out at the top instead of the other way around, which is the general practice," said Mr. Mase. "We knew the proper way to do it, theoretically, was to bring the steam in at the top where the gases are coolest and out at the bottom where the gases are hottest so that the hottest steam would be in contact with the hottest

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Have You Heard The Story. . .

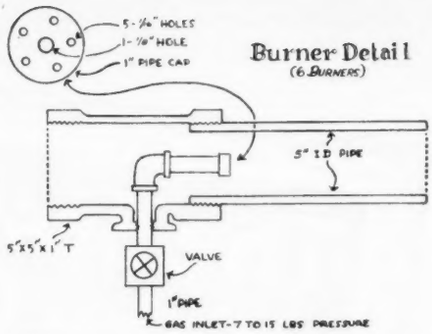
Of the gun man who swaggered into a saloon in the days before the Volstead Act and demanded a stein of beer. When the stein was placed on the bar, the stranger blew the froth off and demanded in a loud voice, "Fill her up." The Dutch bartender nervously complied with his wish, but again the stranger blew the froth off and demanded in a still louder voice, "Fill her up," at the same time volunteering the information with an air of braggadocio, "Do you know who I am?" "Well, I am a go-gettin' fool from Texas." "Vell, I knew you vus a go-gettin' fool, but I didn't know you vus from Texas," the bartender timidly replied.

The point of the story is this: most jobbers, as we have learned from experience, are the go-getting kind. They expect and insist on getting a square deal. They want right prices, as well as quality, and they aren't all from Texas.

The Steiner Oil Company has always endeavored to supply the jobber with just what he wants, and when he yells "Fill her up," or complains of the quality or thinks the price is not right, we have always endeavored to play square with him. Not because we have been intimidated, but because we believe he is entitled to a square deal, and because we want to be known by our willingness to meet him just a little more than half way.

Give us a trial. We guarantee you will not have to blow off the froth and yell for your rights.

The
STEINER
OIL COMPANY
Wichita Falls, Texas



Detail of gas burners in which high pressure gas takes the place of air pressure to induce draft.

gases and the coolest steam in contact with the coolest gases.

"We tried it that way and we burned out so many of bottom tubes that we reversed it and now we get the heat we want without destroying the tubes."

The steaming tank is a riveted and welded 7 by 18 foot tank. Lugs are riveted to the sides and the tank is supported by these lugs on six I-beam posts like a still except that there is no brickwork around it. The tank is insulated and has a manhole in the top, and also one at each end near the bottom.

The steam line from the superheater connects with a five-inch heater extending the length of the tank inside and coming in through an elbow through the bottom at the far end. The header is placed about six inches from the bottom of the tank and the underside is pierced with numerous slots cut with an acetylene torch.

The header is wrapped with fly screen to keep the charcoal from getting in and clogging up the slots. The whole steaming installation cost around $1200.

How the Steaming Is Done

WHEN the charcoal in one of the absorbers is to be treated, the manholes in the absorbers are opened and men go into the absorber and shovel the charcoal into bags. Six men and a team do the job. The bags are hauled on a wagon the few hundred feet to the steaming tank and dumped in. When the charcoal is all in, the manhead is bolted on the tank.

This is another special feature that ought not to be disregarded by any plant operator putting in a similar reactivating system. An elbow of four-inch pipe is screwed into the manhead and the four-inch nipple is tapped to take two lengths of two-inch pipe. When the manhead is in position two lengths consisting of a couple of joints each of two-inch pipe are screwed in place and led off to a safe open place a short distance from the tank.

Steam is let into the bottom of the superheater at a pressure of about five pounds, being throttled down from the boiler pressure of about 80 pounds, and at a temperature of about 240 F. Then the burners in the superheater furnace are lighted. The steam starts to flow from the superheater into the steaming tank at a temperature of about 600 F.

and gradually builds up to about 1200 F.

As the temperature begins to rise, a circle of flares of oily rags are lighted on the ground around the ends of the pipes leading from the manhead. In a short time the hot steam has heated up the charcoal to the point where the heavy ends of the gasoline, which are not ordinarily vaporized in the routine process of steaming out the absorbers with saturated steam at about 250 F., begin to come off through the pipes. These immediately catch fire from the flares and burn up, out of the way and under the watchful eye of the plant superintendent instead of being allowed to float in a cloud along the ground until they might reach the boiler furnaces or some other fire and cause a dangerous blaze.

After awhile all the gasoline vapors have been driven off. The fires go out and then the manhead is taken off and the manhole left open. The steaming is continued until the steam coming out of the manhole reaches 700 or 800 F. which takes from 12 to 20 hours according to conditions. At this stage of the proceedings, the steam pipes are a dull cherry red and the body of the charcoal itself is red hot.

The fires are turned off when this temperature is reached but the steam is left on for a time and the charcoal is allowed to cool. It reaches 250 to 300 F. in about 12 to 15 hours and it is then possible for men to handle it. It is then shoveled into bags again and replaced in the absorber. If it is much above 350 F. activated charcoal will ignite when exposed to the air.

The entire cost of reactivating the charcoal from one absorber runs about $70 for labor and $50 for fuel and steam, Mr. Mase estimates. The charcoal from one absorber is reactivated once a month now as a matter of routine, thus reactivating all of them once every three months.

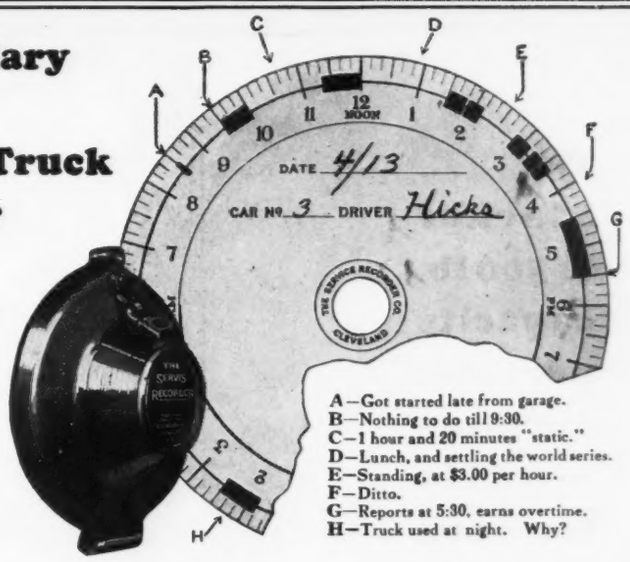
While one absorber is down for reactivation the plant is operating at about 80 per cent efficiency on the other two. While Mr. Mase says it is impossible to figure accurately the loss of charcoal in each steaming, he estimates that it is well below two per cent.

Mr. Mase believes that the contamination of the charcoal comes first from the heavy ends of the gasoline absorbed which is not heated to its boiling point by the temperature used in steaming out, second the heavier substances in the gas which are probably some of the lighter fractions of the absorption oil which are entrained in the gas as well as impurities carried in by the steam.

The heavy ends of the gasoline are driven off in vapor form as described, by the reactivating process, and the other substances are burned out by the extreme heat to which the charcoal is subjected in the steaming tank.

While no appreciable amount of air is present in the steaming tank, a slow oxidation does take place at the temperatures attained, due to the steam partially breaking down thereby oxidizing

The Diary of a Tank Truck Driver



THE Servis Recorder, easily attached to any truck, gives you a complete chart or picture of the daily productive and non-productive time of your trucks.

It tells you how much time is taken to load and dump. —What time each truck starts out and when it gets back.

And the way your truck keeps moving when a Servis Recorder is writing its diary—will pay for the Recorder in a few weeks' time.

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Let us tell you how Servis Recorders are saving money for large and small oil companies.

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The Dayton Air Compressor has achieved its wide popularity because it is always on the job. It is always rendering service because it has the smallest number of parts—nothing to get out of order.

No Connecting Rods or rod bolts; no crosshead pin or cotter pin. Automatic release and control; automatic spring tension Take-Up on belt.

Dayton engineers made simplicity of construction their objective. That is why you find Daytons favored by men who control many stations.

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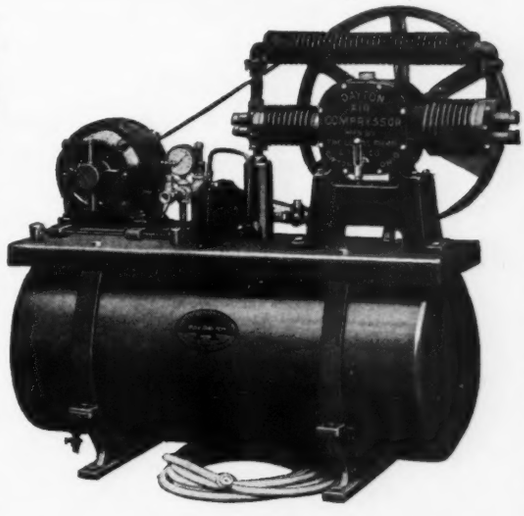

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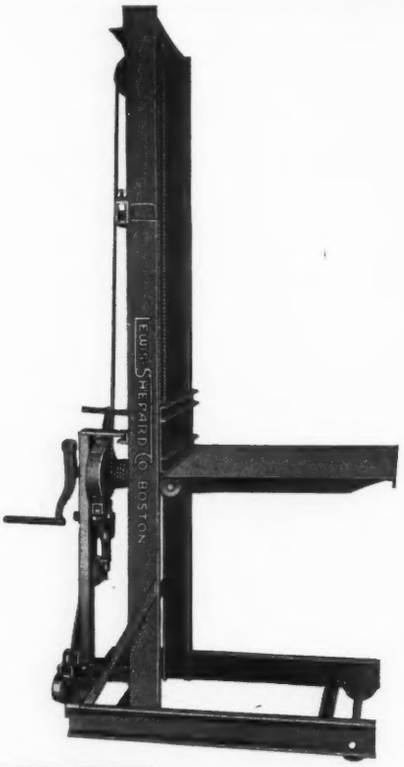

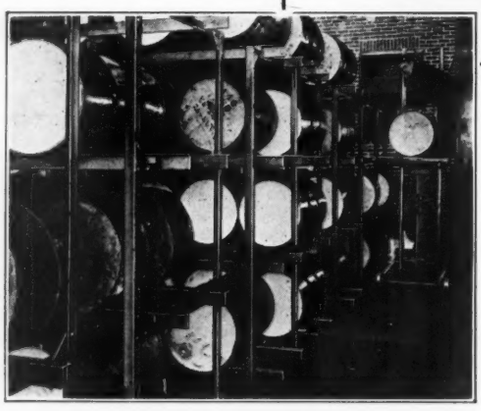

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the gummy deposits from the pores of the charcoal. Carbon monoxide and hydrogen are present in the effluent steam from the treater.

Tests made on the charcoal after treatment show that not only is the original activity of the charcoal restored but it is even better than when first received from the manufacturer, Mr. Mase says.

In steaming out the absorbers, steam at a pressure of about 25 pounds is used and the absorbers are equipped with a back pressure regulator which holds the pressure between 25 and 30 pounds.

The gas from the absorbers passes through a long series of open coils where it is cooled by water sprays before going back into the line.

A big C & G Cooper gas driven compressor with low and high stage sides operates on the uncondensible gases while a small Ingersoll-Rand steam driven compressor picks up the vapors from the tanks. It has been found to be more economical to handle the vapors from storage tanks separately from the fixed gases as in putting the two together much of the gasoline from the rich vapors is carried away and lost.

Empire Gas & Fuel More Than Doubles Profits

NEW YORK—Empire Gas & Fuel Co., principal petroleum subsidiary of Cities Service Co., reports net earnings of $10,811,003 for the fiscal year ended Nov. 31, 1925, compared with $4,534,504 in the preceding fiscal year.

Gross earnings in the year increased to $53,618,920 from $47,290,727 reported for the year before. Operating expenses were $36,778,921 as compared with $36,567,203. Net operating income increased from $11,173,521 to $17,309,375.

The balance sheet as of Nov. 30, 1925 showed current assets of $21,928,443 as against current liabilities of $12,424,365, leaving working capital of $9,504,078. In the year before current assets were $18,980,805 and current liabilities were $11,672,355, leaving working capital of $7,308,450. Of the current assets on Nov. 30, 1925, more than $4,430,000 was in cash, compared with $3,427,722 in 1924. Plant and investment item remained about the same, being $264,550,613 in 1925 as compared with $264,464,833 the year before.

Changes in Marketing Company

EDGEWOOD, IA.—The management of the Arlington Oil Co., Inc., has changed recently. F. H. Hatch, who has been president, has retired. He is succeeded by Dow Clute, former vice president who will be manager. D. A. Newton formerly was manager.

STONEVILLE, N. C.—The Robertson Oil Co., which operates a chain of filling and bulk stations in the Piedmont section of North Carolina, recently acquired the Golden Rule Oil Co. of Madison, N. C.

Square Deal for Customer and Employe And Fair Profit is Our Aim

By B. H. Anglin
Vice President and Sales Manager, Indian Refining Co.
Written Exclusively for National Petroleum News Special Marketing Issue.

IN common with all other marketing organizations our one and only goal is a legitimate and continuing profit. not how many gallons sold but how much net profit? That is the answer, in our mind, to the problem of successful marketing.

Three years ago we decided to move our offices from New York to Lawrenceville, Ill. the location of our refinery, and to abandon marketing in some of the widely scattered territories where, though our sales were considerable, operations were less advantageous from a profit standpoint because of the distance from our source of supply.

Since that decision we have withdrawn from all direct marketing except in Illinois, Michigan, Indiana, Ohio and Kentucky and have been establishing in these states sufficient outlet to absorb our gasoline production, at the same time developing distributor connections for the marketing of Havoline oil throughout the United States.

Since beginning this new policy, we have been through the mill of reformation many times. In starting the reorganization it soon became apparent that for many years we had been gradually becoming over-centralized. The efforts of our field men were largely discounted if not actually nullified by red tape.

Matters of minor importance were taking up the time and energy of home office sales directors. Frequently matters of major importance were being passed upon by subordinates. Our unwieldy and red tape bound system was a constant obstacle to effectively meeting ever changing marketing conditions.

In addition to this we had been suffering from an antiquated credit procedure, resulting in an internal warfare between this all important department and the sales organization, and an accounting system whose principal product was a history of the results of our operations so belated as to bear little or no relation to current conditions.

I believe that, unless these two activities are kept constantly in tune with marketing policy and effort, better marketing will long continue to be little more than a hope.

Reorganize Accounting System

We have, therefore, been carrying on a thorough reformation of our credit and accounting departments concurrently with the reorganization of our sales force. As to our credit and collection department: as against the old credit school, whose main objective, from the salesmans point of view, seemed to be the cancellation of orders and whose constant attitude was "let the salesman find some other customer," our credit department is today a most valuable adjunct to our sales organization.

B. H. Anglin, vice president and sales manager Indian Refining Co., Lawrenceville, Ill.

Our reformed accounting procedure has resulted in a simplification of method that has been so quickened as to be at all times closely in step with current conditions, putting us in a position to forecast with remarkable accuracy the results of proposed developments or additions at any point, and, through promptly measuring the results so forecast, to quickly determine the reasons for our failure to reach the objective and to apply necessary remedies while the situation is hot. This has all been stated in terms our operating force could easily understand.

We can today isolate any given operation, any bulk station, any filling station or any salesmans activities and measure its or his value to us in terms of profit producing units. I know of no one factor which will more quickly and completely bring about better marketing methods throughout the industry than a wider knowledge of operating costs and necessary spreads obtained through common sense accounting.

How marketing costs have been reduced is shown by the fact that in March, 1926, a greater volume of goods was sold than during the preceding March, and total marketing costs were $95,000 less than those of the same month in 1925.

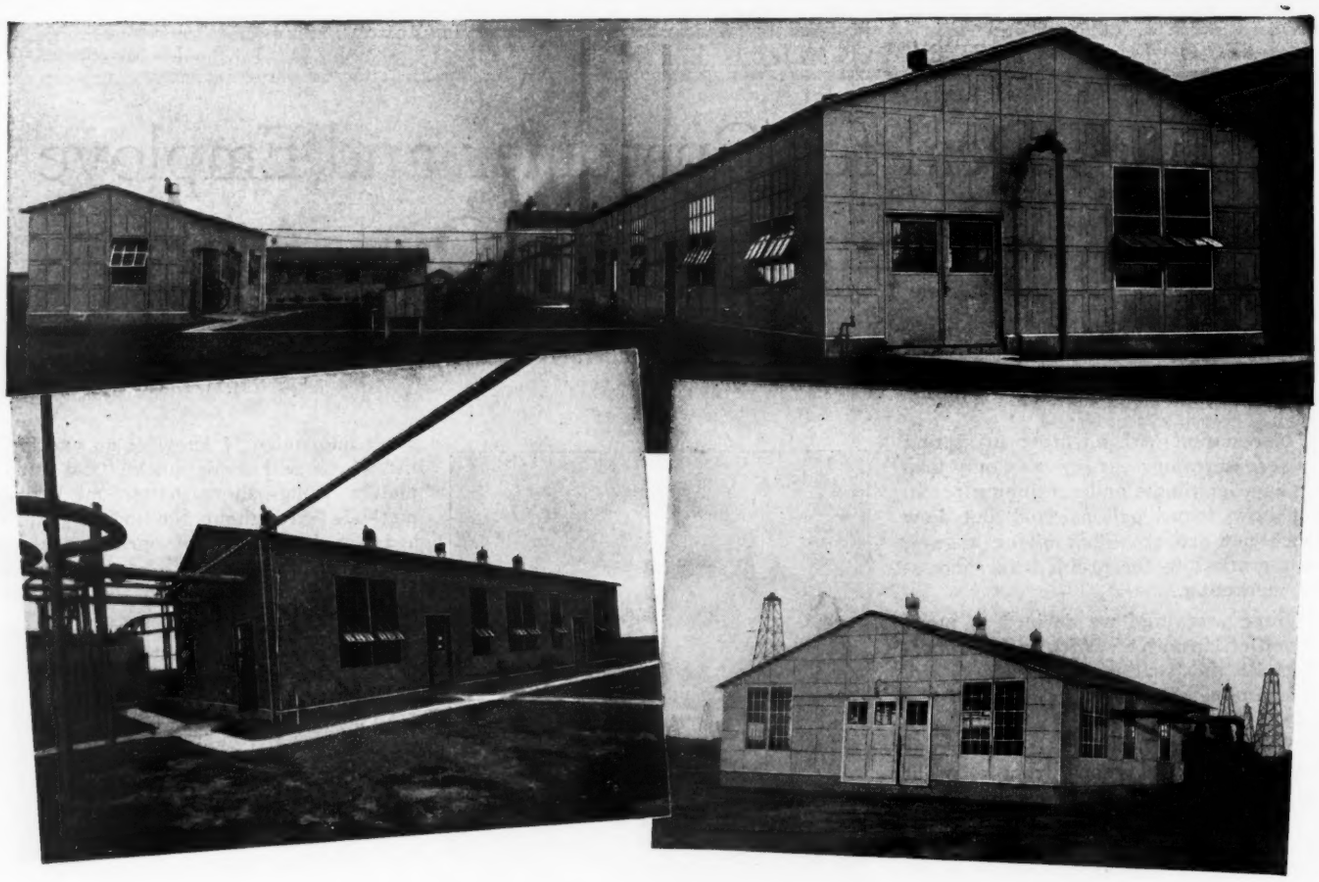
Division of Territory

OUR direct marketing organization, which is confined to Illinois, Indiana, Michigan, Northern Kentucky, and Ohio, is divided into eight districts with district offices at Detroit, Fort Wayne, Indianapolis, Terre Haute, Joliet, Lexington, Evansville, and Dayton. Incident to our reorganization we have carried through a complete decentralization. In each district office we have a district manager, and one or more marketing and operating assistants with the necessary accounting and clerical force.

The district manager is in full charge of and is held wholly responsible for the entire operation in his district. He is thereby in position to administer our accounts quickly and maintain a much better relationship with his trade through a complete knowledge of conditions maintained throughout his district and an intimate acquaintanceship with all circumstances surrounding any transaction.

This has in itself resulted in a great lessening of petty grievances that before arose due to long distance administration. The district manager is a part of his district. Any customer with a complaint can easily reach the district manager in person, get his trouble ironed out and find out that the manager is a good human fellow, just as he is, which he could never do dealing with strangers hundreds of miles away, by letter and telegraph. To the local customer, the district manager, whom he knows and likes, is the Indian Refining Co.

This arrangement, while strengthening the hold of the company in its marketing districts, gives the officers at the home office their proper positions as directors of the policies of the company



Better Building for all Marketing Purposes

For warehouses, oil storage, garages, stables, offices, service stations and all other uses in the marketing of petroleum products Truscon Buildings are preeminent.

They are manufactured by Truscon of rust-resisting copper steel, non-combustible, and lower in cost than any other type of permanent construction.

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The Truscon Laboritories, Detroit, Mich.
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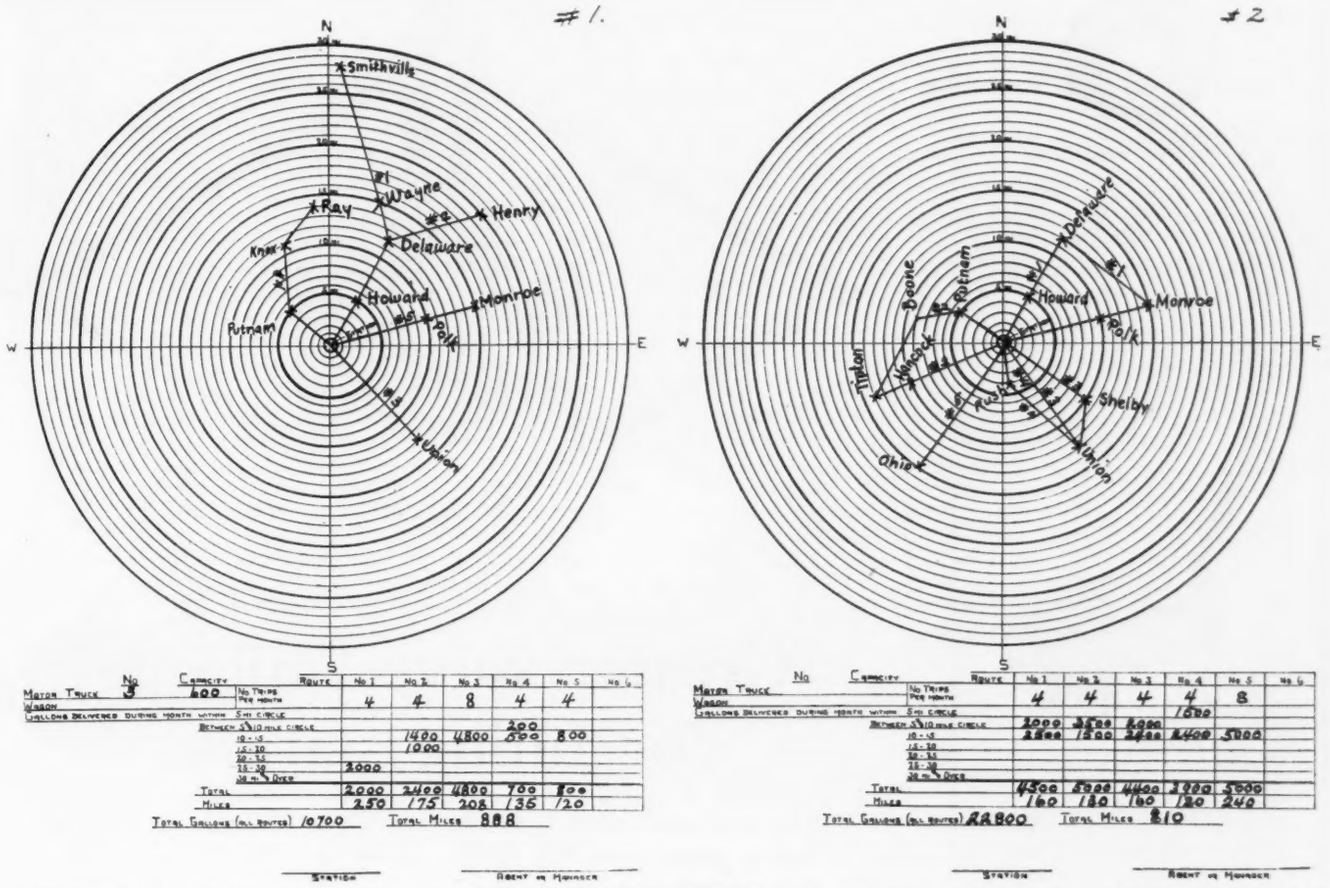
TRUSCON ★COPPER-STEEL BUILDINGS

Standardized for the OIL INDUSTRY

★COPPER ALLOY STEEL RESISTS RUST

An enduring better steel for the manufacture of Steel Buildings. Copper Steel assures permanent value and performance at minimum first cost.

Truscon Offers complete attractive, economical, and non-combustible service stations including Steel Windows and Steel Doors.



These cuts show what can be done in increasing tank truck efficiency by working out the routes by means of the radius chart that has been developed by the Indian Refining Co. sales department. No. 1 above shows the routing of a tank truck out of a typical one-truck bulk station. This truck was delivering 10,700 gallons a month on five routes, and making 888 miles to do it. No. 2 shows what happened after No. 1 chart had been carefully studied. Route 1 in Chart 2 is a consolidation of Routes 1, 2 and 5 in Chart 1. Routes 3 and 4 were created by obtaining two customers to be served on returns from Route 3 on Chart 1. Routes 2 and 5 are new business. After the rearrangement had been made, the same truck and driver were delivering 22,800 gallons of gasoline a month on five routes and traveling only 810 miles to do it.

instead of slaves to detail, and leaves them free to devote their time to advisory and supervisory attention to its operations. In addition, the company is the financial agent for the districts. The physical setup of each of these district offices is much the same. Each has jurisdiction over approximately 20 to 30 bulk stations, these in turn being supported or not, according to whether they are in the company's direct marketing territory, by Indian owned and operated service stations.

The bulk stations themselves are operated by agents, either upon a salary basis, in which case we own all the motor equipment, or upon a commission basis under which in most instances the agent owns the equipment. In either event, each district has its tank wagon superintendent and, where the number of filling stations is sufficient, a district filling station superintendent.

Organization of Districts

THE first mentioned reports to the district manager and is responsible for tank wagon route development, selection of location for and installation of leased gasoline dispensing equipment, maintenance of tank truck service, and the all-important matter of delivery costs.

We have for six months given special attention to delivery costs and have developed what is known as the tank truck P&L, under which each tank truck route is charged up in one section with full maintenance of truck, including depreciation, gas and oil used, repairs, tires, and driver's salary.

In a second section, it is charged up with fixed expenses such as automobile insurance, licenses, et cetera; and in a third section, with the leased dispensing equipment installed upon its particular route.

This puts us in a position to measure the profit-making possibilities of a given route and at the same time the selling ability of a given tank truck driver. As a result of this procedure, we have made many radical reorganizations of our tank truck routing, resulting in a reduction of delivery costs in units involving the operations of sometimes as many as 20 trucks in one section, of over half a cent per gallon. It is frequently found that many routes have been favored in pump installations whereas less aggressive drivers were suffering as a result of poor physical distribution.

In many instances, we found overlapping of trucks operating between stations and have been able through rearrangement of station radius to improve service with a smaller number of trucks.

Rearrangement of tank wagon routes to the best advantage is a direct responsibility of the tank wagon superintendent. Through the use of a socalled radius chart, a reproduction of which is shown herewith, the tank wagon superintendents were able to show the drivers themselves the possibilities for improvement and most of the drivers are cooperating heartily in cutting down the costs of selling that are caused by faulty routing.

When it is considered that a tank truck averages 15,000 miles a year it can be seen that a saving of 10 miles per day per truck mounts up to one fifth of the mileage of the truck.

The Filling Station Superintendent

THE filling station superintendent is responsible for hiring and supervising the filling station attendants. It is his job to see that the stations are kept up to a high standard and that the attendants are diligent salesmen. Also, he is responsible for the carrying out of any sales promotion plans that may be formulated at the main office and for keeping up a constant canvass in his town for business.

Jenkins Renewable Disc

Jenkins Disc No. 946—A disc for oil, not exceeding 100° up to 50 lbs. pressure.

No. 936, a disc for oil, not exceeding 100°, 50 lbs. to 100 lbs. pressure.

No. 1106, a disc for oil, not exceeding 150°, to 200 lbs. pressure.

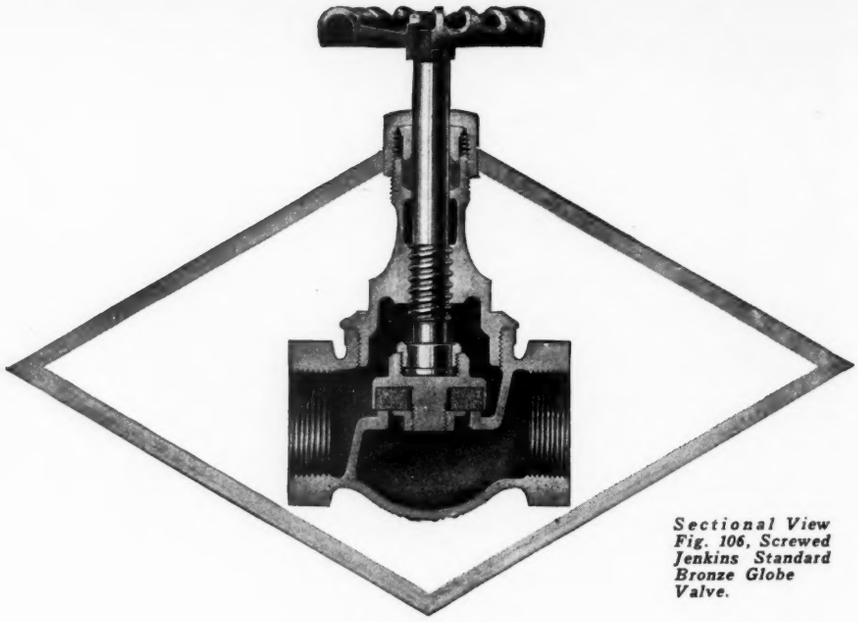
Fig. 121
Jenkins Bronze Whistle Valve

Fig. 121, Jenkins Bronze Whistle Valve. This valve and the Horizontal Check Valve shown below, used with the No. 936 disc were recently made standard equipment by a manufacturer of gasoline pumps for filling stations.

Fig. 117

Screwed, Jenkins Standard Bronze Horizontal Check Valve.

Fig. 720
Jenkins Bronze Rapid Action Valve



Sectional View Fig. 106, Screwed Jenkins Standard Bronze Globe Valve.

Greater valve "mileage" for filling stations

The man who keeps a filling station knows how his customers appreciate "mileage." And he realizes that the "more miles per dollar" idea is a good one to follow in his own purchases of such equipment as valves.

The Jenkins "Diamond" stands for valve "mileage." It stands for long-term, low-cost valve service — for freedom from frequent replacements.

Valves for use on oil lines

Valves that are typically Jenkins, that are made for the maximum rather than the average service—are furnished in types for use in oil and gasoline lines.

Jenkins Gate Valves, for example, when so ordered, may be supplied especially packed and tested for oil service. Jenkins Renewable Disc Valves may be supplied with Jenkins Renewable discs for oil. There are genuine Jenkins for practically every valve requirement. At supply houses everywhere.

JENKINS BROS.

80 White Street ..... New York, N. Y.
524 Atlantic Avenue ..... Boston, Mass.
133 No. Seventh Street .. Philadelphia, Pa.
646 Washington Boulevard .. Chicago, Ill.

JENKINS BROS., Limited
Montreal, Canada London, England

FACTORIES:
Bridgeport, Conn. Elizabeth, N. J.
Montreal, Canada

Always marked with the "Diamond"

Jenkins Valves

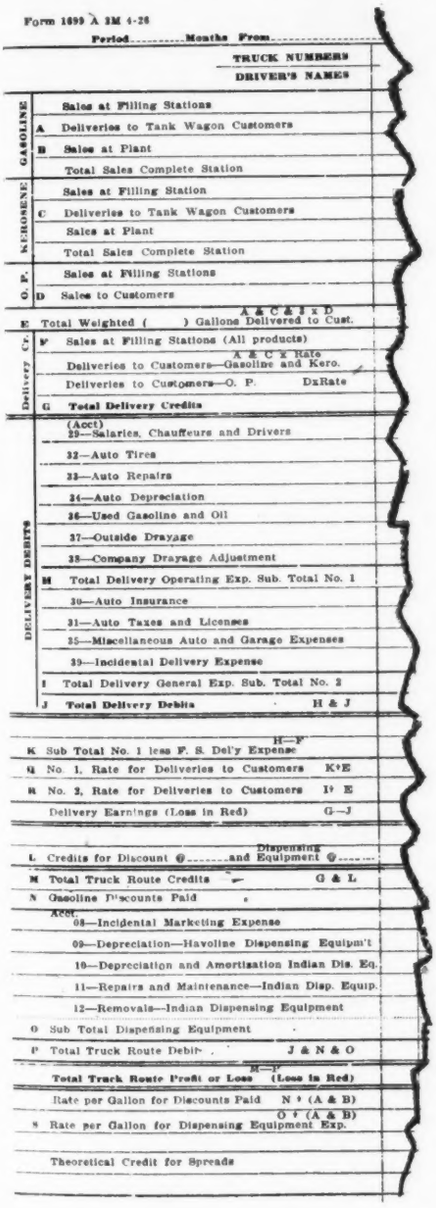
SINCE 1864

The importance of well trained station attendants cannot be overemphasized but, instead of conducting a formal school for this purpose, our service station superintendents are constant walking teachers and, where a station salesman shows outstanding ability, we transfer him from one town to another, where he works with the others and sets them a pace that the likely ones are certain to struggle to match.

Also, in towns where station men are lagging, they are transferred frequently to towns where the stations are manned by up and coming crews, where they catch the spirit if they have the makings of good men in them. In fact, we carry out this principle throughout all our operations.

This policy had not been long in effect before a livening up of the whole force was apparent.

It is our policy not to build stations directly opposite to those of competitors, and also not to build too many in a town or territory. Before we decided to build stations our men have checked up the possible business to be obtained in that town. From that we figure what would be our reasonable share. Then we build enough stations, properly located as we estimate, to take care of that much business.



Form 1699 A 2M 4-26

Period.....Months From.....

TRUCK NUMBERS
DRIVER'S NAMES

GASOLINE
- Sales at Filling Stations
- A Deliveries to Tank Wagon Customers
- B Sales at Plant
- Total Sales Complete Station

NEROSENE
- Sales at Filling Station
- C Deliveries to Tank Wagon Customers
- Sales at Plant
- Total Sales Complete Station

O. P.
- Sales at Filling Stations
- D Sales to Customers

E Total Weighted ( ) Gallons Delivered to Cust. A & C & B x D

Delivery Cr.
- F Sales at Filling Stations (All products)
- Deliveries to Customers—Gasoline and Kero. A & C x Rate
- Deliveries to Customers—O. P. DxRate
- G Total Delivery Credits

DELIVERY DEBITS
- (Acct) 29—Salaries, Chauffeurs and Drivers
- 32—Auto Tires
- 33—Auto Repairs
- 34—Auto Depreciation
- 36—Used Gasoline and Oil
- 37—Outside Drayage
- 38—Company Drayage Adjustment
- H Total Delivery Operating Exp. Sub. Total No. 1
- 30—Auto Insurance
- 31—Auto Taxes and Licenses
- 35—Miscellaneous Auto and Garage Expenses
- 39—Incidental Delivery Expense
- I Total Delivery General Exp. Sub. Total No. 2
- J Total Delivery Debits H & J

K Sub Total No. 1 less F. S. Del'y Expense H—F

Q No. 1, Rate for Deliveries to Customers K x E

R No. 2, Rate for Deliveries to Customers I x E

Delivery Earnings (Loss in Red) G—J

L Credits for Discount @.....and Dispensing Equipment @.....

M Total Truck Route Credits G & L

N Gasoline Discounts Paid

Asst.
- 08—Incidental Marketing Expense
- 09—Depreciation—Havoline Dispensing Equipm't
- 10—Depreciation and Amortization Indian Dis. Eq.
- 11—Repairs and Maintenance—Indian Disp. Equip.
- 12—Removals—Indian Dispensing Equipment

O Sub Total Dispensing Equipment

P Total Truck Route Debits J & N & O

Total Truck Route Profit or Loss (Loss in Red) M—P

Rate per Gallon for Discounts Paid N ÷ (A & B)

S Rate per Gallon for Dispensing Equipment Exp. O ÷ (A & B)

Theoretical Credit for Spreads

A sample tank wagon profit and loss sheet used by the Indian Refining Co. to determine what the status of each tank truck is as a profit maker. One of the principal reasons for making this so elaborate was to call the attention of the tank truck driver to the numerous factors of cost that figure in the expense of operating a truck before a profit can be marked up. When the driver sits down to make out this report he is bound to do some hard thinking. His thinking is likely to lead him to strive to cut down these elements of expense wherever possible.

Motor Oil Marketing

WE have been through the policy of hiring all salesmen in the main office and training them in a salesmen's school before sending them out on their territory and we have abandoned it. Hiring of salesmen is now entirely in the hands of the district managers who are to be held responsible for the results their men bring in.

We found that, when a man was put through the office school and then sent out on the territory, his associates viewed him with more or less suspicion and made his road thorny if they could. "You are the new guy from the main office, been to school and everything, all right, let's see you strut your stuff," was the general attitude of the salesmen on the job to the newcomer.

In the hiring of salesmen, those who measure up to the ordinary standards of cleanliness, pleasing appearance and so on are of course, given first consideration. The character of the applicant is looked up carefully.

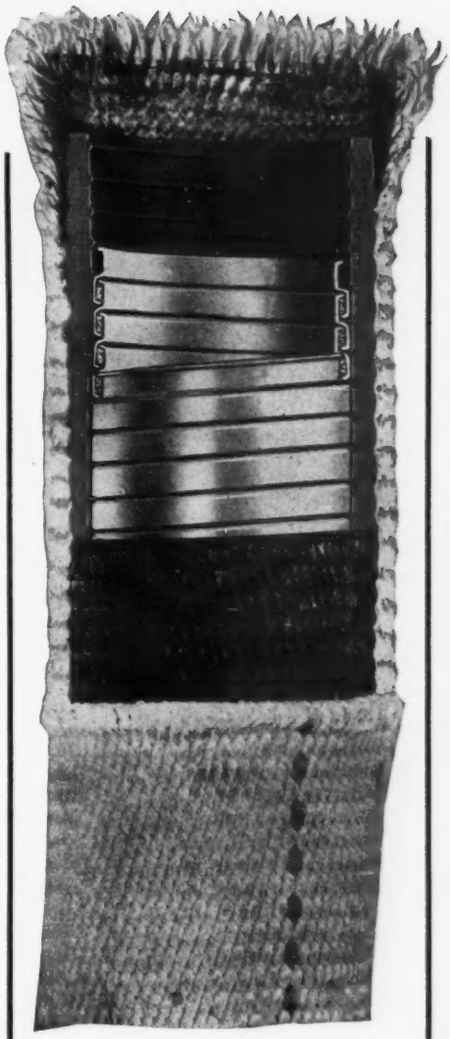
The most important feature bearing on the salesman's success is likely that of being able to deal with the people in the territory in which he is working. This is largely taken care of by the fact that the district managers do the hiring. For instance, a district manager a large part of whose trade came from the hill districts of Kentucky would hardly hire a Harvard graduate with a New England accent and a belted coat to work in his district. A homeoffice might. Possession of imagination, and the merchandising instinct of course is given full weight in considering an applicant.

The work of the entire sales force is backed up by what is called the "sales library" in each district office. Every account on the company's books and every prospect has a card in this Kardex library. The information is furnished in their reports by the salesmen themselves and is carefully entered on the appropriate cards for future use All information that would be helpful to each salesman is forwarded to him with his route sheet The card index acts as a tickler file for each salesman

We have often seen the havoc that follows the attempted speeding up of regular salesmen by the sending of

REX GASOLINE HOSE

RUGGED Strength



Freedom From Gasoline Hose Troubles

A mighty strong gasoline hose, built to endure, is exactly what you get when you buy REX Gasoline Hose.

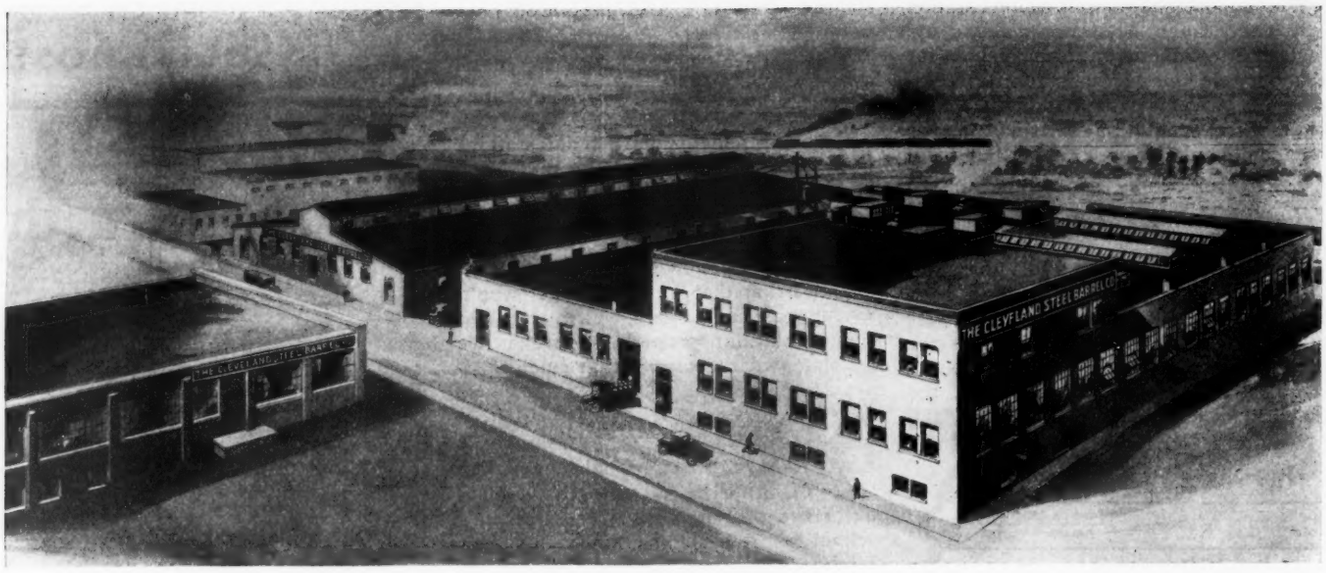
Its construction gives the strength of steel with the flexibility of rubber.

REX Hose used with REX Bell Couplings frees you from hose troubles. We unconditionally guarantee them to satisfy, you to be the judge.

Try a few lengths. You will always use REX Hose. Write for further information.

Chicago Tubing & Braiding Co.
260 N. Clinton St.
Chicago, Ill.

Choice Territories Still Available to Agents



Home of The Cleveland Steel Barrel Company

Better Steel Barrels

A large modern plant and up to date equipment insure a quality product and quick shipments.

THE CLEVELAND STEEL BARREL CO.

9612 Meech Ave.

Cleveland, Ohio

Cleveland STEEL BARRELS

special salesmen-go-getters into their territories. Often the special man was too much of a go-getter, with the result that he oversold his account, left them with more goods on their shelves than they could handle and the regular salesmen left on the route have to bear the brunt of the disappointed customer's anger.

Sometimes the net result to the company of a special salesman's efforts was a lasting grudge that took much time and tact to heal.

The special salesmen that we send out work along a different line and they are judged on a different basis. In the first place, it often happens that one of them works for several weeks in a territory without making a sale himself. He counsels the other salesmen, giving them the benefit of the special ability he is supposed to possess, routes their work for them and altogether acts more like a helpful coach than a competitor.

Also, these special men are judged by the company not on the basis of a flashy performance in selling but on conditions prevailing in the territory they have been over three or four months after their visit.

Credit Training of Salesmen

SALESMEN since time began have lost time and heart in soliciting and selling accounts that the credit man in the home office knew could not be sold for financial reasons. We try to overcome this and have been successful in large measure, because we make the salesman an assistant credit man. He is taught that, before he goes to solicit an account, he should find out as well as he can the man's standing in the community, what his towns people think of him, what the local banker thinks of him. This is not so difficult as it might appear.

Where the account is a very large one, the salesman is taught to ask for a financial statement and he is told that he need not regard this as insulting a man. As he enters the prospect's place of business he makes a mental note of what kind of goods he handles. If his stock represents well known, standard brands of tires, spark plugs and such the chances are, other things being equal, that he is a substantial man.

All the information the salesman has gathered is turned in to his district manager who has at his command Duns and Bradstreet's and who makes up a credit file for the customer. Then it is up to the salesman to make sales to this customer in amounts that the man can handle and pay for and the salesman is the more likely to keep within the limit because he is the man who has to collect the bill. The salesmen are the company's only collectors.

How Salesmen Are Paid

WE have two systems. One, straight salary and expenses and the other salary and commission, the salesman paying his own expenses. When we start a man out, especially if he is married, we start him on straight salary usually because most young men with responsibilities are likely to worry about where the rent is coming from.

After a man has been on salary for a time, if he feels that he could make more money on salary and commission and pay his own expenses, we transfer him to this arrangement. However, if he doesn't make good on this basis he is permanently through. We do not let him go back to the salary and expenses plan because, if he can't make more for himself on the salary and commission basis, it proves that he is a dead one and that he was not worth what the company was paying him under the other arrangement.

We like to get married men for city salesmen and unmarried men for jobs that take them out into the country for long periods. A young man's wife is likely to be dissatisfied if he is away from home for long stretches at a time and a dissatisfied wife is not an asset to a young man trying to get along in the world. For jobs where the man is home every night, we like to get married men for they are usually more stable.

How Filling Station Men are Paid

WE like to attract able young men to be our filling station salesmen, for we call them salesmen and not attendants. We know that the only way to do this, and keep them, is to make it worth their while to stay. In the first place, we pay good wages to our men, as good as any oil company pays for similar work. In the second place, we have established a bonus system. This system has not been worked out thoroughly yet, we are feeling our way, but we have got results that lead us to think we are on the right track. The way the bonus is set is by an arbitrary standard.

Before we build a filling station we have made a traffic count—the number of cars passing the station every day, the nature of the location and so forth, and have made an estimate, it is really only an educated guess, as to what the gallonage of that station should be.

And we figure that our oil business should run at a minimum in the proportion of about one gallon of oil to every 40 gallons of gasoline. As a matter of fact, our average over our entire marketing territory runs about one gallon of oil to every 36 gallons of gasoline.

Having figured just about how much gasoline the new station should sell, we offer a small bonus to the men if they sell a total that is considerably under that figure without telling them what we think is the actual possibility of the station. If they make a little this month, it whets their appetite to make more next month and they redouble their efforts to exceed their previous record.

Probably they do raise the volume of their sales and earn a little larger commission. So it goes on until they have reached the total that we originally figured the station should make. Then

The
NATIONAL REFINING COMPANY
PETROLEUM PRODUCTS

THREE MODERN REFINERIES:
Marietta, Ohio Refinery
operated on Pennsylvania Crude
Findlay, Ohio Refinery
operated on Ohio Crude
Coffeyville, Kansas Refinery
operated on Midcontinent Crude

National Headquarters
NATIONAL BLDG., CLEVELAND, O.

Do You Know
where you are at?

Our FLATLEY OIL SYSTEMS,

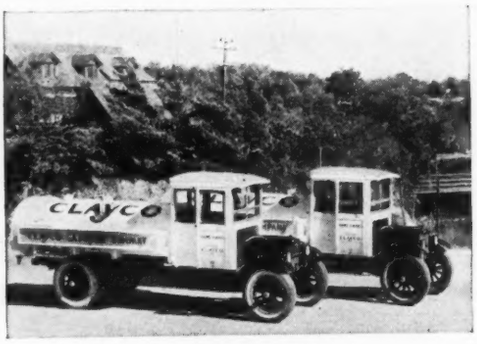
Daily Reports for Bulk and Filling Stations, Tank Wagon Delivery Receipts, and many other needed forms for the large or small oil jobber, will tell you daily.

Endorsed by Jobbers and State Associations all over the country.

Inquire of your State Secretary or send for samples direct.

Florence Publishing Co.
42 S. Third St.
Minneapolis, Minn.

The Truck Tank of tomorrow is here today!



"I Have Been Using Columbian Truck Tanks for Twelve Years"

"You are possibly wondering why it is that I go on using Columbian Truck Tanks year after year, placing an order for a new tank from time to time and never saying a word to you about them."

And below we quote further from a letter written by Mr. O. E. Skipwith, formerly agent for the Clayco Gasoline Company, now the Sims Oil & Refining Company of Dallas, Texas.

"I have been using Columbian Truck Tanks for 12 years. The first truck tank that I bought from the Columbian twelve years ago, is as good today as the day it was delivered to me. The three point support and partition mounting that you folks use in the construction of your tanks is a great thing, especially when you stop to consider how long it adds to the life of both truck and tank. At the present time I have 17 Columbian Truck Tanks in service and I am well pleased with all of these tanks."

COLUMBIAN STEEL TANK COMPANY

EST'D 1894 — TANKS FOR THE WORLD

1405-1625 WEST 12TH STREET — KANSAS CITY, MISSOURI

"Oil Land Development and Valuation"

by R. P. McLaughlin

Petroleum Engineer and Geologist, formerly State Oil and Gas Supervisor of California.

It Tells you:

- How to locate and space oil wells properly;
- Method of drilling wells;
- How to test wells;
- How to gauge output of wells;
- How to use production reports;
- How to repair wells;
- How to deepen wells;
- Rules for abandonment of wells;
- Methods of shooting wells;
- How to evaluate oil wells;
- Examples of repair work at oil wells.
- Examples of efficient development of a new field.

200 pages, pocket size, flexible, 59 illustrations. $3.00. Check with order.

For sale by

National Petroleum News

817 Caxton Building, Cleveland, Ohio

we do not raise the quota. We do not snatch the apple we have held out away from under their noses. We let them get a good bite of the apple. If they run the gallonage considerably above what we had figured was the normal for that station we pay them a good big bonus on it.

As a matter of fact, we do not lay claim to any brilliance in the marketing of gasoline and oil. We aim at a square deal for the customer, a square deal for our employes and a reasonable profit for the company, and our whole policy is based simply upon our ideal, as nearly as we can attain to it—100 per cent common sense.

Three California Fields Promise Fresh Yields

Staff Special

HOUSTON, May 14.—Drilling for deep pay production in the Inglewood field of the Los Angeles Basin may be expected to follow the completion of the Tidewater-Associated Oil Co.'s No. 2 Vickers well, which started off making about 900 barrels daily when plugged back to 2990 feet after drilling to total depth of 3210 feet. The well has dropped to about 200 barrels daily, but it at least proved the existence of paying production deeper than the lowermost zone under development previously at about 2465 feet.

Lifting of restrictions on the development of 36 city blocks along the ocean front in Huntington Beach will also prove a new factor in Los Angeles Basin development this summer. Fairly close drilling may result from the small holdings in this part of the Huntington Beach area, which is considered certain to produce oil in some quantity. Wells of the Standard Oil Co. (California) a half mile northwest of the area of lifted restrictions yield 125 to 600 barrels daily at depths of 3800 to 4550 feet, providing the nearest performance records on which to base comparisons.

The proving of a deeper zone below the present exploited horizon of the Los Cerritos extension of the Long Beach field is also fraught with possibilities for increased Los Angeles Basin production. United Oil Co.'s No. 2 Taylor, near the center of the Los Cerritos area, recently cored 150 feet of oil zone carrying 80 feet net of sand at total depth of 4730 feet, or 400 feet below the first producing horizon. It is making about 400 barrels of oil daily, 11 per cent cut, after completion. Another well in this zone is the McKeon Oil Co.'s No. 7 Los Cerritos, producing 350 barrels daily, 40 per cent water and emulsion, at 4785-4875 feet.

Most wells previously drilled in the Los Cerritos area were finished without their owners protecting against possible deepening operations, the size of casing and methods of completing now preventing their going on down with old holes. Most of the development in the Los Cerritos second zone, therefore, will require drilling all the way down from the surface.

The NEW ST. LOUIS

The Better Pump — *for* Better Marketing

An Announcement of Vital Importance to Every Pump Buyer

The better pump, mechanically—built on an entirely new principle that puts pump buying on a continuously-protected investment basis . . . . regardless of the purpose the pump is to serve . . . . either now or in the years to come. It is built of standardized, interchangeable quality parts throughout, instantly convertible into any one of four types—which permits the pump operator to regulate his pump investment to suit any condition, at any time, in any territory.

Important Investment Features

1st . . The NEW St. Louis Pump may be bought as a plain hand operated type.

2nd . . It may be converted into a combination hand and motor-driven pump, merely by adding the special St. Louis motor assembly (with mercury switch) to the existing hand pump. *The original investment is still protected.*

3rd . . It may be converted into a self-measuring hand pump, merely by adding the St. Louis mechanical measure assembly. *The original investment is still protected.*

4th . . It may be converted into a combination hand and motor-driven, self-measuring pump, merely by adding the special St. Louis motor assembly (with mercury switch) and the St. Louis mechanical measure assembly. *The original investment is still protected.*

5th . . Or, the NEW St. Louis Pump may be bought complete as a combination hand and motor-driven, self-measuring unit and the various components may be removed for addition to other pumps in other localities or for warehousing, as the case may be. *The original investment is still protected.*

Think what this means! Since every part of every NEW St. Louis Pump is interchangeable, every dollar invested in NEW St. Louis pump equipment—originally and subsequently—is continuously protected.

Mechanical Features

Mechanically the NEW St. Louis is a better gasoline marketing device. It combines all the elements of

SAFETY · · ACCURACY · · COMPLETE VISIBILITY · · SPEED
STANDARDIZATION · · ATTRACTIVENESS · · LOW MAINTENANCE
SIMPLICITY · · OPERATING EASE · · CONTINUOUS PERFORMANCE

It is equipped with the powerful St. Louis Duplex Rotary Piston Pump—the type that has pumped millions of gallons. It has extra long bearings—is self lubricating and self priming. Contains only seven moving parts—no gaskets, no leathers and no packing between piston and wall.

Investigate the NEW St. Louis Pump! Learn in detail how it protects every dollar of your pump investment:—*First*, because it is built on a standardized, interchangeable and convertible principle: *Second*, because it does everything a pump should do both from the standpoint of the buyer and seller of gasoline: *Third*, because it delivers continuously satisfactory performance over a long period of years.

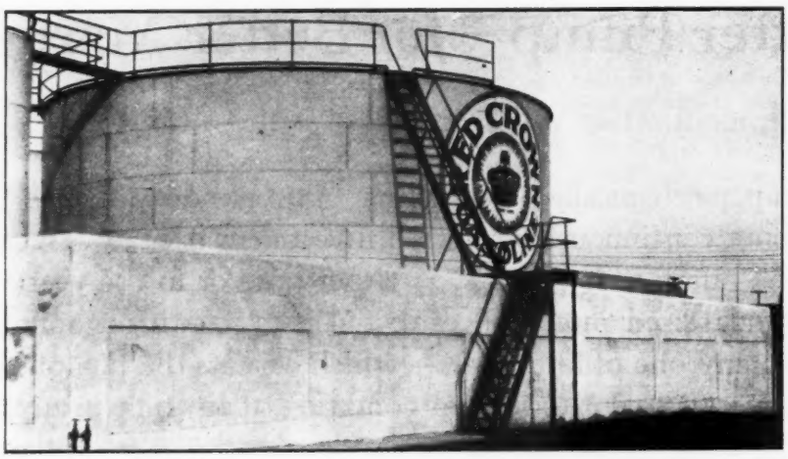
Besides the NEW St. Louis Pump described, the St. Louis line includes complete equipment for storage, pumping and distribution of gasoline and oil.

ST. LOUIS PUMP & EQUIPMENT CO., 3711 Forest Park Blvd., ST. LOUIS, MO.

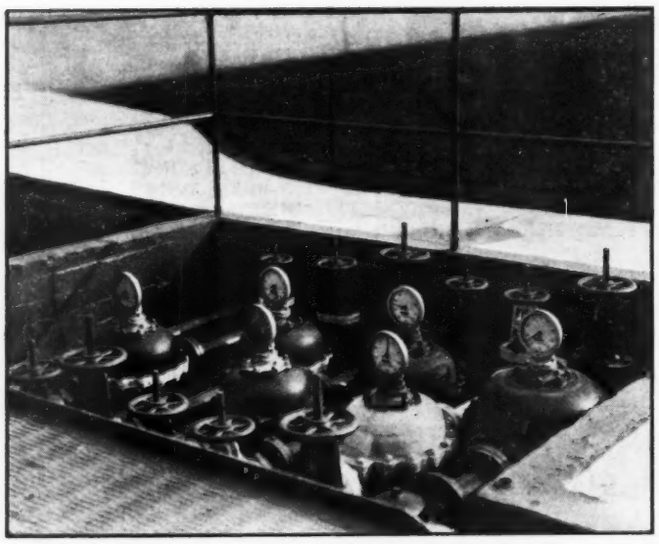
A Pump *INVESTMENT*

Equipment Features at the North Side Bulk Station

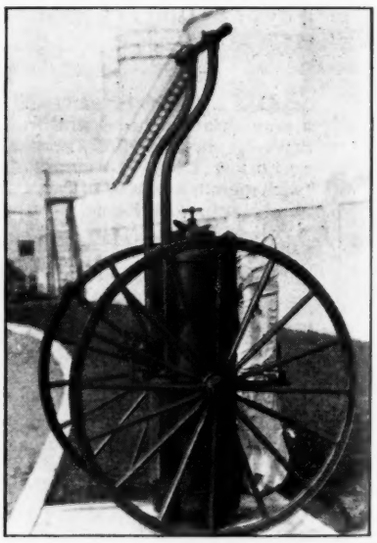
Iron ladders and iron rails on all runways. Iron ladders lead down to the ground inside the dikes. Runways on top of tanks are painted black. These keep tanks' appearance clean as it is unnecessary to step off painted paths, thereby leaving dirty footprints.

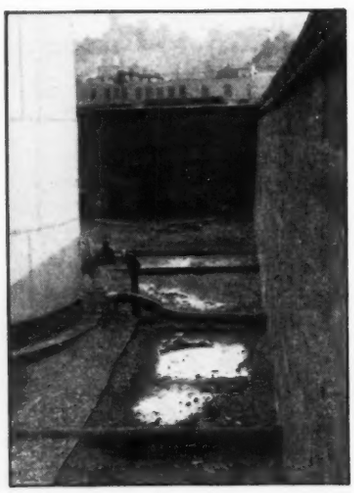


Tank outlet. A flange with square butt is welded in tank opening. The square butt is drilled to accommodate a standard gate valve and also drilled at the corners. The valve is bolted to the butt. The end of the pipe line also has a square flange drilled to fit the valve and at the corners. The corners of the two square butts are bolted together to increase rigidity of the installation. Because the lines are exposed to summer heat and the liquid in them expands, a by-pass with check valve is placed around the gate valve. This enables expanding oil to pass back to the tank but prevents any oil in the tank from escaping.



Niagara meters, made by Buffalo Meter Co., manifolds and controls in open concrete pits. The California climate permits this arrangement, no snow or ice being encountered. All oils received at or dispensed from the station are metered.

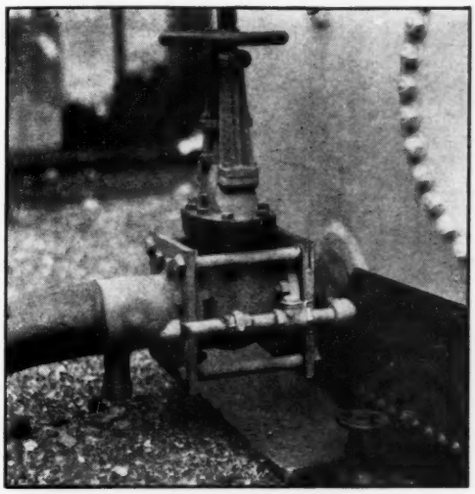




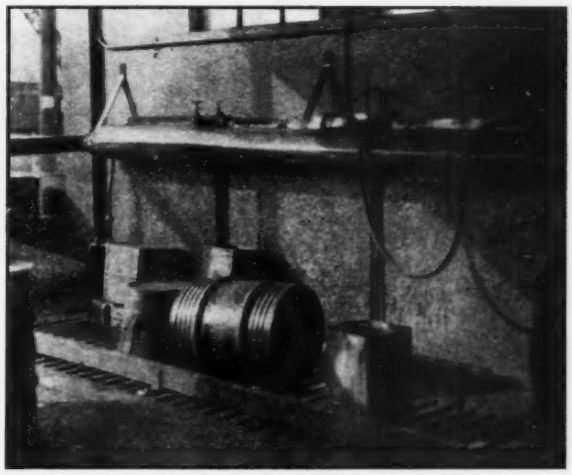
Inside the dikes. Crushed stone walk to the valves. Inside top of dike showing concrete baffle or lip designed to turn back any boiling oil. The dikes hold the full capacity of the tanks they surround.

Another view of the metering and manifold pit.

Of Standard Oil Co. of California at San Francisco



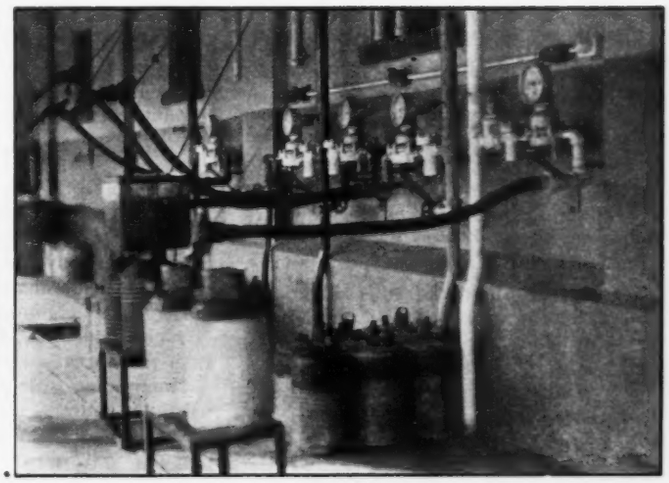
Barrel washer. This consists of a drain pit from which rises a short hot water pipe to the top of which is attached a slotted revolving nozzle. Barrels are set over the pipe and nozzle which are small enough to pass easily through the bung. The water is then turned on and a whirling fan shaped spray of hot water quickly washes away all oil and grease. The water drains through the bung into the pit. Any water that may remain is taken out with a vacuum or suction cleaner. A long electric lamp of small diameter may be placed through one of the bungs to enable the workman to see accumulations of water. The suction cleaner has a nozzle long enough to reach any part of the drum.



Foam tank with canvas bag covering hose.

Platform sleds holding 10-gallon oil cans. Three-wheeled jack trucks are placed under the platforms and raised. The platforms with their loads of 10 cans each may be conveyed from fillers to loading platform or stored compactly in the warehouse.

All tanks are surrounded by 14-foot concrete dikes. Casings are set in the bottom of the dikes and the pipe lines placed through the casings. The space between the casing and pipe is packed with mineral wool. This arrangement takes care of expansion and contraction.



Keystone gasoline or kerosene meters, made by Pittsburgh Meter Co., in lines to which are attached Penn-Flex fillers. These fillers may be put to the heads of barrels or cans and opened. When the liquid rises to the top of the receptacles it automatically trips a valve and closes the filler.

P. M. Miskell

Security of the Jobbers' Gasoline Supply Rests in Part On Jobbers Themselves

By P. M. Miskell

General Manager, Empire Refineries, Inc.,
and President Western Petroleum Refiners' Association

THE growth and development in efficiency of the Mid-Continent refining plants, and the part they will continue to play as a dependable source of supply of the Independent jobbers of the middle west is told in the accompanying article by P. M. Miskell, general manager of the Empire Refineries, Inc., Tulsa, and president of the Western Petroleum Refiners Assoc., prepared especially for this Better Marketing issue of National Petroleum News.

Their interdependence is such, Mr. Miskell points out, that unsound business practices and questionable ethics followed in either branch must adversely affect the operations of the other, whence the need for close study of policies and tendencies by both branches.

DURING the early days of our country most manufacturing enterprises were established in close proximity to their source of raw material, and, with productive capacity at a low level, were dependent principally upon the demand in their immediate vicinity for a market. With the development of transportation, however, there was a coincident expansion in commercial activities and manufacturers were enabled to enlarge the areas wherein their products might be sold.

The pioneering period of any industry is often one wherein there is a struggle against adverse conditions which are the direct result of insufficient knowledge or lack of guiding experience. It is usually only after a lapse of time and many failures that economic errors are detected or methods of procedure adopted best suited to the actual needs and ultimate stability of an industry. And this is true with respect to both its production and its sales.

As markets were extended, manufacturers encountered new problems in their business. Where formerly consumers were but neighbors, under the new order of things, consumers were unknown, their responsibility was a matter of doubt, and the volume of their demand unmeasured. It was also found that quantity and distance affected the cost of merchandising, and that the ability to supply the market at all times entailed additional investments and distributing facilities at distant destinations.

Under conditions of this character it was but natural that the middleman or jobber should find a place in business. His willingness to share investment costs, opportunity for intimate knowledge of consumers and their needs, ability to handle both large and small consignments, were well adapted to the needs of manufacturers and his services represented an economic method that bridged the gap between the factory and the ultimate consumer.

Has Stood Test of Time

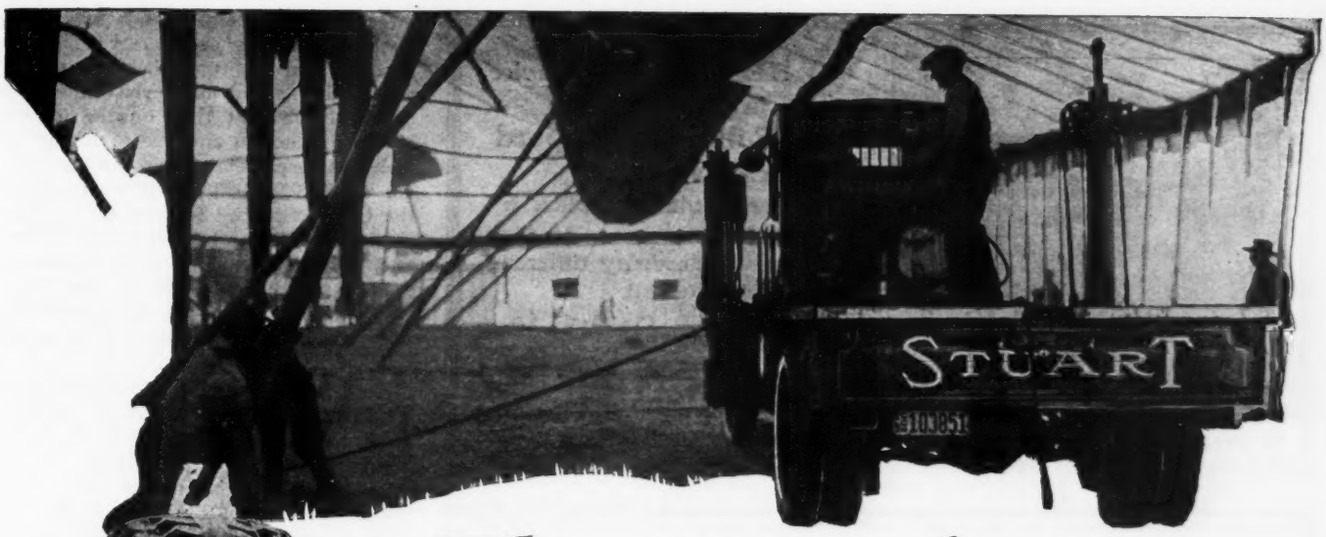
METHODS of distribution must, however, be tested with respect to their utility, and when, after the lapse of many years, and amidst the intricacies of merchandising by wholesale, mail-order, chain-store, general-store, house-to-house, telephone, telegraph, cash-and-carry, self-service, credit, installment, etc., the jobber still survives, we must concede that history bears testimony to the fact that his services are essential to industry.

It has been stated that there is a tendency in business toward a closer contact between manufacturer and ultimate consumer. However, while it may be true that manufacturers controlling a large volume of production, and with large resources at their command may enter the consumers' market in an effort to develop goodwill, minimize risks, secure first-hand knowledge of consumption, obtain a broader field for economies that might increase their profit, or last but not least, escape penalty for actions beyond their control, the establishment of integrated companies in no way demonstrates that the method of distributing through other than factory-owned outlets is basically unsound. The physical facilities employed in distribution by either integrated or purely jobbing organizations are identical. While integrated companies may dispense with the actual service of the jobber, they have found no way of eliminating the jobbing function.

The manufacture and sale of gasoline has disclosed no marked divergence from the economic principles and experience of other commodities. The rapid increase in demand, to keep pace with the growth of motor transportation, has, however, within comparatively few years, resulted in the development of a marketing system that supplies the consuming public with facilities for purchase unexcelled in the distribution of any single commodity. Almost from the inception of this vast system the jobber has played an important part.

Rapid Growth of Market

NO longer ago than 1878 a Mr. Fawcett of Philadelphia built a steam-driven wagon; in 1880 a Mr. Copeland equipped a bicycle with a steam motor; in 1887 a Mr. Olds completed a horseless carriage, which, while steam driven, used gasoline as fuel; in 1892 a Mr. Duryea completed a vehicle that derived its motive power



They PAY their way

San Francisco, California, April 26, 1926

The B. F. Goodrich Rubber Co.
Akron, Ohio

When we purchased our 3½ ton Fageol Truck, it was especially designed to facilitate the handling, carrying and erecting of large circus tents for state and county fairs.

The truck when loaded weighs in the neighborhood of 22,000 lbs. and in order to keep schedules, must make from 35 to 45 miles per hour.

When we took delivery of this truck, it was equipped with other than Goodrich Tires. The best average mileage we were able to obtain was 1,000 miles per tire.

Last August, we despaired of finding a solution for our tire problems as the truck must run on schedule and due to tire trouble we found ourselves in serious difficulties.

As a last resort, we equipped with Goodrich Silvertown Heavy Dutys. The truck has now travelled more than 6,000 miles and the tires are certainly good for another 10,000 miles.

The writer wishes to thank you for solving this most difficult problem for us.

J. L. STUART MANUFACTURING CO.
J. L. STUART, *President*

"Best in the Long Run"

The proofs of tire service are in the performance. The above letter tells a story of performance and ECONOMY that the thoughtful truck operator will not ignore. The real answer to every operator's tire problem is found in the fact that Goodrich builds Silvertown Heavy Dutys *expressly for truck and bus service.*

THE B. F. GOODRICH RUBBER COMPANY, Akron, Ohio
***In Canada:* Canadian Goodrich Company, Kitchener, Ontario**

Goodrich Silvertowns

HEAVY DUTYS *for* BUSES *and* TRUCKS

Type L-1 20x45x12 ft.

WHEN you need a service station in a hurry

Wire Collect to Shepard

Quick delivery.

Ready for quick erection by your own men.

There are seventy different types of permanent

Shepard Stations

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Announcement

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Announces the starting of their Sunshine Plant at Wichita Falls, Texas.

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WESTERN OIL CORP. of TEXAS

Brown Bldg. **Wichita Falls, Texas**

direct from gasoline, and two years later a Mr. Haynes operated his first gasoline car at the then considered remarkable speed of seven miles per hour. From that time on the growth in the production and use of motor vehicles has been remarkable, until at present over 20,000,000 are in operation in the United States. So important a place in modern life has been accorded motor-transportation that, it has been asserted, a crop failure would be far less disastrous than a failure in the power and lubricant supply necessary to its maintenance.

An issue of National Petroleum News dated early in the year 1910 called attention to an establishment in St. Louis equipped with upright pumps for the sale of gasoline to motor cars. The pumps and their visible feature, the use of hose in effecting delivery of gasoline from pumps direct to motor vehicles, the drive-in facilities of the establishment, the ability to serve several cars at the same time, and the economy of the method of sale were all described in detail. Possibly this was not the first of our modern filling stations, however, it is of interest to note that it was considered a sufficiently novel manner of marketing gasoline to warrant considerable comment in a petroleum trade publication no further back than 16 years.

A well known economist recently stated that at the present time gasoline reaches the consumers of our country through 125,000 filling stations, 57,000 garages, 33,000 repair shops and supply stores, and 50,000 roadside pumps operated by farmers or country stores. This estimate places the total number of establishments retailing gasoline at 265,000 and the total number of gasoline pumps operated by these retailers at 562,000.

Are Complementary Parts

DURING the upbuilding of this tremendous marketing organization the independent jobber found a place as a recognized and necessary part. Refineries, prohibited by the small volume of their transactions from establishing costly systems for the sale and distribution of their products, other refineries of larger size with no established marketing facilities, and even integrated companies have found the jobbers an economic and important factor in their business. The refiner and the jobber are indeed, but complementary parts of the same business organization.

Should the manufacturer find his sales facilities failing to keep pace with competitors, or the salesman find his manufacturing facilities impaired, it seems obvious that the ultimate results would be equally disastrous. In the face of such a situation, and with large investments already made, prudence would suggest the desirablility of a mutual recognition of the interdependence of refiners and jobbers, the maintenance of a satisfactory relationship between these complementary divisions of

our industry, and the careful examination of practices and policies that might affect their welfare.

It is unfortunate that statistics regarding the ultimate disposition of gasoline are but meager, as here in the Mid-Continent field there are many plants dependent on the jobber for their consuming market. The Mid-Continent plants consign about three-fourths of their interstate shipments of gasoline to destinations within what is commonly termed Indiana Territory and Nebraska, while the jobbers of that vast area are chiefly dependent upon the Mid-Continent refineries for their gasoline supply. Approximately 33 per cent of the motor vehicles of the country are operated within Indiana Territory and Nebraska, while the Mid-Continent, last year, shipped 26 per cent of all gasoline leaving U. S. refineries. The extent of the market wherein the jobbers and refineries of these districts jointly operate may be appreciated from these figures.

Comparative Figures

AN examination of the available statistics for 1925 and those of six years ago discloses numerous comparisons that are not at all disparaging to the Mid-Continent as a source of gasoline supply, but somewhat less satisfactory from the standpoint of indicated gasoline demand within the Indiana Territory and Nebraska consuming area. For example over the period mentioned Mid-Continent plants increased their shipments 167 per cent, whereas the corresponding increase for the country as a whole was 176 per cent. To make the comparison in another manner, in 1919 the Mid-Continent plants shipped 27 per cent of the total gasoline leaving all U. S. refineries, and in 1925 their share of the business was but 26 per cent.

From these figures it might be inferred that the Mid-Continent is losing some importance as a source of gasoline supply; but when it is considered that, over the same period of six years, the increase in motor vehicle registrations for the area wherein the bulk of its product is marketed was but 133 per cent in comparison with 161 per cent for the country as a whole, it will be appreciated that the record of refinery shipments is far from unsatisfactory from the standpoint of gallonage alone.

The Mid-Continent refineries have surpassed the level established by the combined plants of the country with respect to increased gasoline yield from crude refined. An examination of the government reports discloses that last year the Mid-Continent produced 38 per cent more gasoline from the average barrel of crude than during 1919, while the corresponding increase for all plants of the country was but 34 per cent. To state this in another manner, the Mid-Continent in 1925 ran 82 per cent more crude to refiners' stills and produced 152 per cent more gasoline than during 1919 while for all refineries of the country the corresponding increases were 105 per cent in crude consumed and 174 per cent in gasoline produced.

On Jan. 1st of the current year there were 132 refineries operating in the Mid-Continent field and their combined capacities aggregated 547,920 barrels of crude oil per day. Of these plants 83 were of less than the average capacity of 4150 barrels. The following small table shows a classification of these plants with respect to crude capacities.

MID-CONTINENT REFINERIES IN OPERATION JAN. 1, 1926

Rated Daily Crude Capacity (Barrels)	Number	Aggregate Crude Capacity (Barrels)
Under 1,000	20	9,370
1,000 to 1,999	24	31,600
2,000 to 2,999	19	43,700
3,000 to 3,999	16	50,000
4,000 to 4,999	7	29,500
5,000 to 5,999	19	96,000
6,000 to 6,999	10	61,000
7,000 to 7,999	3	21,000
8,000 to 8,999	3	24,500
9,000 to 9,999	0	0
10,000 and over	11	181,000
TOTAL	132	547,920

Seventy-eight of the plants shown in the above table were in operation on Jan. 1, 1920 and at that time their combined capacity was 263,175 barrels of crude per day. Since then these identical plants have increased their capacity by 148,625 barrels. In addition to this 54 new plants, now operated, and having an initial capacity of 100,870 barrels per day have been constructed. This latter group has in turn added 35,250 barrels to its capacity since the time the plants were built. In addition to these plants the Government lists 93 plants now idle, with an aggregate capacity of 195,130 barrels per day, which, from the the best reports available, are capable of operation should conditions warrant.

Quick to Improve Methods

MID-CONTINENT plants have been quick to take advantage of improved methods of refining that would either increase production of the most essential products or improve their qualities and, in recent years, have improved the economic condition of their industry by a careful study of conditions and cautious operating program. This has been equally true of both the small and large plants. Situated in the heart of a most prolific light oil field, it would appear that the particular plants upon which the jobber must depend for his supply will be in a position to obtain their share of crude, apply identical methods of production, and be subject to manufacturing costs that will compare favorably with those of integrated companies.

From the standpoint of efficiency of operation, capability for expansion, quality, and price stability, the jobbers have no reason to question the ability of their manufacturing factor to place them in position to keep pace with their competition, and measured by facilities for distribution of products the refiners have no reason to question the ability of their sales organization, as represented by the jobber, to function with equal satisfaction.

With the physical ability to meet all requirements of their business, should disturbances arise that divert conditions from a prosperous course, the most natural action for either jobber or refiner would appear to be an inquiry as to causes responsible for the trend. Policies and practices should be analyzed with respect to their effect, not only on the particular branch of industry in which a unit is engaged, but also with respect to other branches of the industry upon which it may be dependent. Inquiries of this nature often lead to the adoption of corrective measures of the greatest value, and often disclose that petty jealousies, or improper and unethical practices, have a potent influence on industry regardless of its economic soundness.

Good Ethics Profitable

IT has been said before that those who are cynical with respect to business ethics believe, or at least pretend to believe, that as a cold business proposition it does not pay to be ethical, and that the whole movement to establish better ethics in business is but a futile gesture. However, if the truth were known, it would be seen that ethical conduct in business is absolutely reflected on the balance sheet. Take, for example, any bad business practices that in isolated instances and in isolated places, have crept into any industry. Careful thought would probably lead to the conclusion that, if every competitor were to indulge in all these practices for a period of thirty days, the whole industry would be so demoralized that they would simply have to right-about-face or meet with disaster. Probably even the few managers who may slyly indulge in a few of these practices at odd times, would admit that they themselves could not indulge continuously in many such practices without bringing ruin on their business.

It is a peculiarly warped mind that excuses itself for indulging in any of these things at any time. It is a mind that thinks itself a little smarter than all the rest of the industry. It seeks to be the single exception to a rule it knows to be applicable to every other management in the industry. If such minds could but look their own thinking squarely in the face, they would probably admit the error of such thoughts, and realize the danger of the actions they contemplate. Conduct based on distorted views and twisted thinking must eventually adversely affect the balance sheet of any industry.

Accounting System for Small Marketer Shows What Each Station is Doing

By Roger B. Stafford
N. P. N. STAFF WRITER

AKRON, O., May 15.

MEN who have a complete knowledge of their businesses and know just what their enterprises are accomplishing, seldom fail. They are competent. On the other hand, incompetence causes more than a third of the business failures in the United States. Bradstreet's gives the percentage as 34.4.

The greatest cause of incompetence, many commercial and industrial wise men tell us, is lack of knowledge of the fundamentals of business and among the fundamentals is systematized accounting. The business man on the brink of failure may be incompetent because he has not had an adequate way of determining whether he has been making a profit or merely existing and failing to provide for exigencies that may rise any day and cause his commercial death if he is not prepared.

The American Petroleum Institute has recognized the need of better accounting methods in the oil industry and has set about to provide the industry with a model accounting method. However, many oil companies already have accounting systems that are practically the same as the tentative form prepared by the A.P.I., or nearly so. And these companies include even the smaller marketing units.

A system that has proved effective for the C. A. Pierce Oil Co., Akron O., and permits the proprietor of that enterprise to know daily just where his business stands, is an adaptation of the Burroughs simplified accounting plan to the oil distributing business.

The system in use by the Pierce company, which is a sole proprietorship and not a corporation, gives the owner definite information within a few minutes of what his wholesale division or bulk plant is earning, the same information about each of his eight service stations and automobile laundry as well as a picture of the whole enterprise.

Allows Constant Check

A CONSTANT check on costs of operating stations or office, keeping salesmen on the road in and about Akron, and of the upkeep of tanks, trucks, buildings and other equipment, is possible. Purchase and sales accounts show the amount of merchandise—gasoline, oils, etc.—on hand from day to day and

This trio operates the C. A. Pierce Oil Co. accounting system: Miss Ruth Houk, Miss Irene Striver, and W. A. Stansfield.

make unnecessary the daily gauging of tanks at bulk plant or service stations. However, gauging is done once a month and if there is a disparity between what the books show should be on hand and what actually is on hand, allowing for shrinkage and evaporation losses, an investigation is started to find out where there may be a leakage.

When C. Arthur Pierce, owner of the enterprise, started in business a few years ago, he wanted to have at his finger tips definite information of what he was accomplishing. He also wanted his general manager, S. E. McFarren, to have the same information. When only a wholesale business was done, it was a simple task but when expansion into the retail branch of market was decided on, Mr. Pierce knew he would have to have a more comprehensive accounting system.

With his bookkeeper, W. A. Stansfield, who is a certified public accountant, he decided on the Burroughs system, which was installed at a cost of approximately $1250, most of which represents the cost of a bookkeeping machine.

"The money was well spent," say those in charge of the Pierce company affairs. Mr. Stansfield worked out with a Burroughs expert a schedule of numbered accounts. He kept in mind that expansion of the business meant expansion of accounting system, so provision was made for the insertion of accounts without breaking the regularity of the number system.

The system may look complex at first glance to an oil man not familiar with accounting, but after the first labors of installation, it has been working smoothly, although minor revisions are necessary as the conpany's business grows and changes.

The company's schedule of accounts with their numbers are shown with this article.

The System for Numbering

THE schedule as printed is virtually self-explanatory. All accounts are in loose leaf ledgers and all posting is done with the Burroughs machine which also carries a total as each item is posted to any account. By adding the totals a trial balance can be taken off in a fraction of the time required under a system in which all posting is done by hand, and if necessary a balance sheet could as quickly be prepared showing the financial condition of the organization at any time.

It will be noted that many of the accounts bear relative numbers. For example, account No. 21 covers the amount of high test gasoline delivered to or bought by service station No. 2. The 2 designates the number of the station and the 1 the commodity. When a sale of high test gasoline is made by Station No. 2 it is credited to account 221. When the young woman that does the posting sees an item numbered 221 she knows this: the left hand 2 stands for sales, the middle 2 that it is No. 2 service station and the right hand figure the commodity sold. Sale of a high test gasoline by station No. 3 would be credited to account 231 and by station No. 4 to account 241 and so on.

Likewise, the numbers for the accounts in the wholesale purchases and inventories and wholesale sales have relative numbers.

The wholesale station and the various retail stations have corresponding accounts except that, at the wholesale station, two grades of gasoline are handled that are not handled at the company's

own service stations. This gasoline is carried and sold to Independent dealers to meet cut price competition. The company at its own station does not care to handle any motor fuel that it considers as being off its standard specifications.

There is a meter on every tank of gasoline, kerosene and oil at the Pierce company's bulk station and on every gasoline pump and lube pump at its service stations. These meters are read and the readings recorded by the station collector each day, on a printed form like the one published herewith.

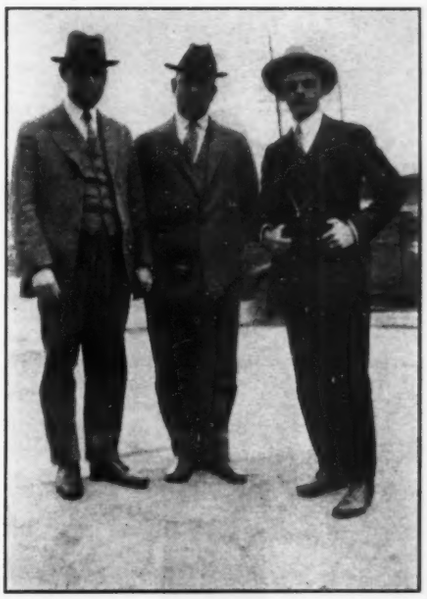
Must Account Fully

THE cash register is of the autographic recording type. Besides registering the amount of a sale or charge and the station salesman's letter, there also is recorded the figures 1, 2, 3, 4, 5, 6, or 7 opposite each sale to designate the commodity. The figures correspond to the numbers of the accounts in the company's books. So when the girl checking over the cash register ribbons each day sees upon it these numbers she knows just what has been sold and from the total amount of the sales, as recorded, just how may gallons of gasoline, kerosene, and alcohol or how many quarts of oil has been involved in that sale.

She foots up the total sales—cash and charges—for each station and compares the meter readings. The station attendant has to pay for any shortage not accounted for at the end of the week. Should he make a mistake and be out one day, the error probably would be found the next and he would be credited with the amount. Gasoline used for priming or testing a pump is noted on the register and proper allowance made for it in the station expense accounts.

Whenever an accessory is sold, the station salesman notes what it was on the cash register ribbon. This is necessary because it would be impossible to have a character on the register for every minor commodity such as tire tape and auto lamps.

With tires and tubes the size can be determined by the girl checker by referring to the printed price card the com-



C. Arthur Pierce, owner; W. A. Stansfield, accountant, and S. E. McFarren, general manager, C. A. Pierce Oil Co., Akron, O.

(Continued on page 96)

Schedule of Accounts used by C. A. Pierce Oil Co.

CURRENT ASSETS
1 Bank account.
2 Cash on hand (change at stations).
3 Petty cash fund
4 Accounts receivable (wholesale).
5 Accounts receivable (retail).
6 Notes receivable.
7 Service equipment on lease.

WASH RACK EQUIPMENT AND INVENTORY
11 Wash rack supplies.
12 ....
13 Grease.

STATION PURCHASES AND INVENTORIES
21 High test gasoline.
22 Low test gasoline.
23 Ethyl gasoline.
24 Motor oils and greases.
25 Tires and tubes.
26 Accessories.
Note—Foregoing are accounts for Station No. 2. Accounts for Station No. 3 would bear prefix 3, e.g., 31, 32, etc. and Station No. 4, 41, 42, etc.

WHOLESALE PURCHASES AND INVENTORIES
97 High test gasoline.
98 Low test gasoline.
99 Challenge high test gasoline.
101 Challenge low test gasoline.
102 Ethyl gasoline.
103 Kerosene.
104 Motor oil.
105 Soap and grease.
106 Alcohol.
107 Miscellaneous merchandise.
108 Small tools, etc.

FIXED ASSETS (STATIONS)
1es Buildings and improvements.
2es do.
Note: Separate accounts are carried for each service station, each numbered according to the number of the station.
1ds Equipment.
2ds Equipment.
Note: Separate account for each station.

FIXED ASSETS (WHOLESALE)
131 Buildings, piers, foundations.
132 Storage tanks, pipes, etc.
133 Railroad switch.
134 Trucks and tractor.

FIXED ASSETS (ADMINISTRATIVE)
136 Office building
137 Office furniture and fixtures.
138 Automobiles.
139 Real estate.

DEFERRED EXPENSE CHARGES
141 Advance payments.
142 Rent paid in advance.
143 Interest paid in advance.
144 Insurance unexpired.
145 Salesman's drawing accounts.
Note: 146, 147, etc., also are numbers of additional salesmen's drawing accounts.

LIABILITIES
151 Accounts payable.
152 Notes payable (unsecured).
153 Mortgage notes payable.
154 Acceptances payable.
155 State gasoline tax.
156 Federal income tax.
157 County and state taxes.

CAPITAL ACCOUNTS
161 Capital (Money invested in enterprise by proprietor).
162 Surplus.
163 Profit and loss.
164 Proprietor's drawing account.

RESERVES
171 Bad accounts.
172 Depreciation.
173 Accrued payroll.
174 Accrued interest payable.

MISCELLANEOUS REVENUES
191 Rents received.
192 Discounts earned.
193 Interest earned.

WHOLESALE SALES
197 High test gasoline.
198 Low test gasoline.
199 Challenge high test gasoline
201 Challenge low test gasoline.
202 Ethyl gasoline.
203 Kerosene.
204 Motor oil.
205 Soap and grease.
206 Alcohol.
207 Miscellaneous merchandise.
Note: These accounts really constitute credits to the accounts of which 97 to 107 are debits.

RETAIL SALES
221 High test gasoline.
222 Low test gasoline.
223 Ethyl gasoline.
224 Motor oil and grease.
225 Tires and tubes.
226 Accessories.
227 Service.
Note: Foregoing are numbers for accounts for Station No. 2. The first figure 2 indicates that the transaction is a sale, the second figure 2 is the station number, and the right hand figure designates the commodity sold.

ADMINISTRATIVE EXPENSES
301 Office salaries.
302. Office rents.
303 Office supplies.
304 Office heat, light, water.
305 Office janitor services.
306 Telephones and telegraph.
307 Credit and collection expense.
308 Bad accounts.
309 Association dues.
311 Donations.
312 Legal expenses.
313 Automobile operating expense.
314 Automobile maintenance and repairs.
315. Traveling expense.
316 Advertising expense.
317 .....
318 .....
319 General station supplies.

FINANCIAL CHARGES
321 Allowances on sales.
322 Discounts allowed.
323 Interest paid.
324 Insurance expired.
325 Taxes.

WHOLESALE DELIVERY EXPENSE
331 Drivers' and helpers' expense.
332 Truck operating expense.
333 Truck maintenance and repairs.

WHOLESALE SALES EXPENSE
341 Salesmen's salaries.
342 Salesmen's expense.
343 Advertising.
344 Entertaining and miscellaneous sales expense.

WHOLESALE PLANT EXPENSE
351 Rent.
352 Heat, light, water.
353 Salaries.
354 Supplies used.
355 Repairs to buildings.
356 Repairs to tanks and piping.
357 Repairs to railroad switch.
358 Roadway maintenance.
359. Miscellaneous expense.

CONSTRUCTION ACCOUNTS
391, 392, etc. for various stations.

WASH RACK EXPENSE
11sx Rent.
12sx Heat, light, water.
13sx Salaries.
14sx Miscellaneous supplies.
15sx Maintenance and repairs.
16sx Claims for damages.

STATION EXPENSE
21sx Rent.
22sx Heat, light, water.
23sx Salaries.
24sx Supplies used.
25sx Maintenance and repairs.
Note: Figure on left designates station number and figure on right expense account number, the letters denoting that the item is a station expense. The letters sx designating station expense were chosen arbitrarily to conform to keys on the bookkeeping machine.

You can buy no better than these Wayne

At $105 these remarkable new Wayne pumps excel anything heretofore produced — *regardless of price*—for downright efficiency, service and value.

In materials, design and workmanship — in operating and mechanical features — they represent the best of Wayne's 35 years of engineering and manufacturing experience.

Dollar for dollar, they are the greatest value on the market.

Model 515 Fill and Serve Wet Hose Type **$105***

Model 517 Fill and Serve Dry Hose Type **$105***

*Single pump price, f. o. b. Fort Wayne. At San Francisco $123. Liberal discount on 25 or more — Standard color red. $2 extra for any other colors. On 5 or more no extra charge—Models 515 and 517 furnished for air, or hand and air operation at slight extra cost.

Immediate Shipment

Wayne Tank and Pump Company, 265 Canal St.
Fort Wayne, Indiana

Branch Offices: Boston, Chicago, Cleveland, Columbus, Detroit, Kansas City, Los Angeles, Minneapolis, New York, Philadelphia, Pittsburgh, San Francisco and St. Louis. - *Warehouses:* San Francisco, Philadelphia, London, England. - *Foreign Offices:* London, Toronto.

An International Organization with Sales and Service Offices Everywhere

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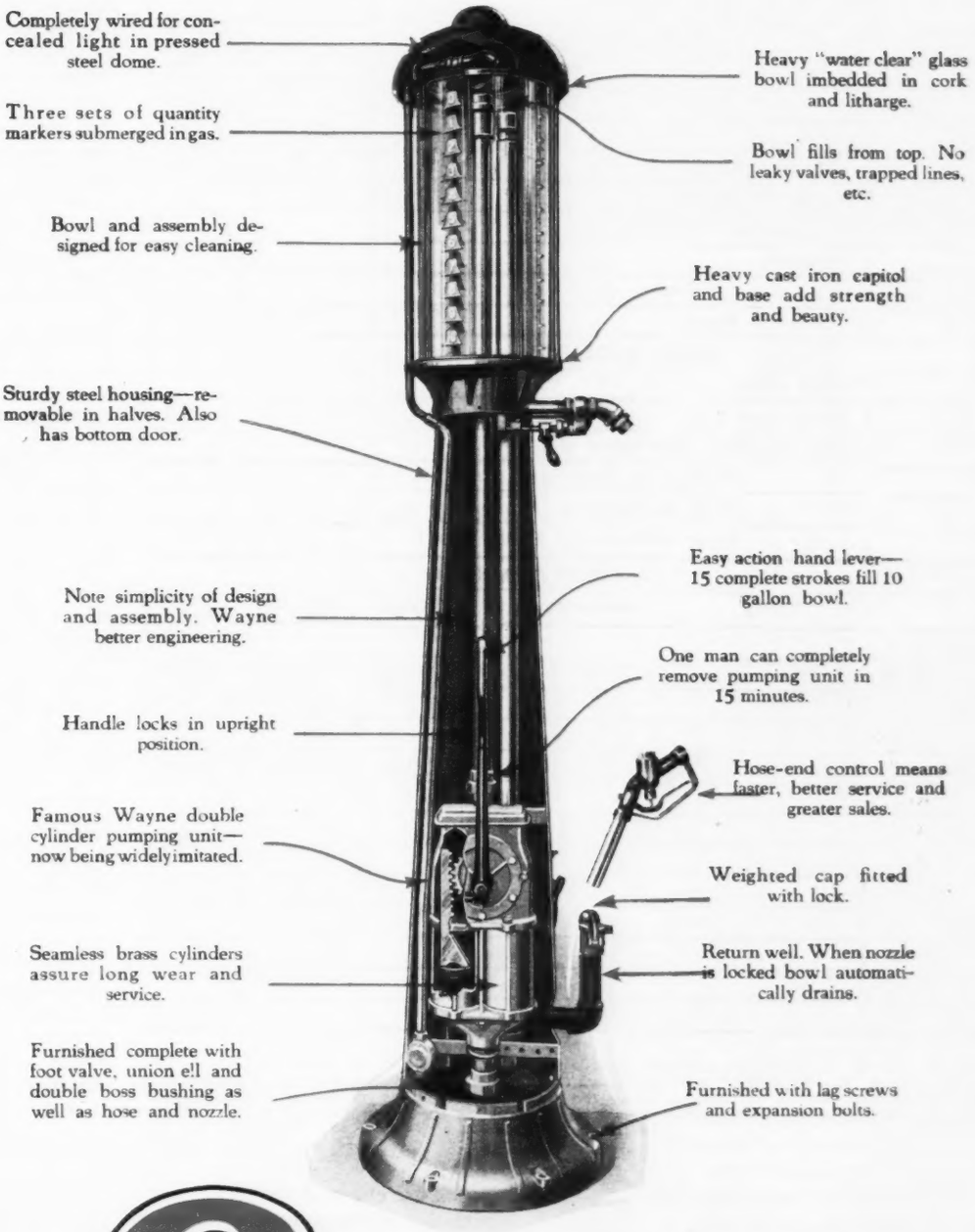
HONEST MEASURE

Pumps at any price
Models at only $105


Completely wired for concealed light in pressed steel dome.
Three sets of quantity markers submerged in gas.
Bowl and assembly designed for easy cleaning.
Sturdy steel housing—removable in halves. Also has bottom door.
Note simplicity of design and assembly. Wayne better engineering.
Handle locks in upright position.
Famous Wayne double cylinder pumping unit—now being widely imitated.
Seamless brass cylinders assure long wear and service.
Furnished complete with foot valve, union ell and double boss bushing as well as hose and nozzle.
Heavy "water clear" glass bowl imbedded in cork and litharge.
Bowl fills from top. No leaky valves, trapped lines, etc.
Heavy cast iron capitol and base add strength and beauty.
Easy action hand lever—15 complete strokes fill 10 gallon bowl.
One man can completely remove pumping unit in 15 minutes.
Hose-end control means faster, better service and greater sales.
Weighted cap fitted with lock.
Return well. When nozzle is locked bowl automatically drains.
Furnished with lag screws and expansion bolts.

ne

PUMPS

New! Wayne is also making a new Positive Stop Pump —Adjustable Discharge Type. Ready now. Write for details and prices.

BLUE RIBBON SERVICE STATIONS
DAILY REPORT

Date _____ Sta. No. _____

ACCT. No.	SALES		
	Cash Sales		
	Chg. Tickets to Incl.		
	Total		
	DISTRIBUTION		
	B. R. H. T. Gal.		
	" L. T. Gal.		
	Ethyl Gal.		
	Oil and Grease		
	Tires and Tubes		
	Accessories		
	Services		
	Total		
	CASH RECEIPTS		
	Cash Sales		
	Misc. Receipts		
	Rec. on Acct. (see other side)		
	Total Cash Receipts		
	Cash in Register		
	Over ((Black) or Short (Red)		

	PUMP READINGS				
	Today	Yesterday	Gal. Pumped	Register	Over (Black) Short (Red)
HT. No. 1					
" 2					
LT. No. 1					
" 2					
Kero					
Alch.					
B.R. Lt.					
" Med.					
" Hvy.					
Tex. Lt.					
" Med.					
" Hvy.					
Q.S. Med.					

Form of slip on which station collector records meter readings at C. A. Pierce Oil Co. service station, Akron, O., and face of envelope on which is shown the business done by a station each day. On reverse side of envelope is space for recording collections on accounts and remarks. Cash register ribbon for each station for the day covered in the report, is filed in the envelope for future reference.

(Continued from Page 93)

pany puts out whenever there is a price change.

Stand On Own Feet

EACH service station is treated as a branch company and put on its own resources, except as to the real estate it occupies. If the ground is under lease, it must pay the rent. It pays the tank wagon price, on paper of course, for the gasoline and other kerosene it buys. It pays the same price for motor oils and greases, automobile tires and tubes, and accessories that any wholesale customer would pay. Against each station are charged rent, light, heat, water, salaries of the salesmen, supplies used such as wiping rags, paper, and such, and cost of maintenance and repairs. Each station must stand on its own feet and if it cannot do so and show a reasonable profit it would be closed. One station was closed when another was installed by the company in a more advantageous site not far distant from the first.

The tank wagon driver makes out a sales slip for each delivery to one of the Pierce stations the same as he would to a dealer connected in no way with the Pierce organization. He files that with the office and the service station is charged with so much gasoline or other commodity.

Each station salesman has his own cash drawer and, when he goes off duty, he is supposed to count the money and make a notation of the amount on the register ribbon. Then he locks his drawer. The relief salesman has his own drawer and when he quits duty he makes a similar notation on the ribbon.

These ribbons are taken up by the collector who attaches to them the readings of the various meters, and turns them into the main office with the cash and a file of the sales charge slips, or a list of collections made by a station salesman.

The check girl then goes over the ribbons of the various stations to determine the volume of sales and writes her findings on the face of an envelope, 4⅝ by 6¾ inches, the form of which corresponds to the slip on which the collector has written the meter readings. (See accompanying reproduction).

Checking in the Office

THE check girl computes the number of gallons as shown on the register and compares them with the meter readings. She also computes the amount for which the various commodities were made and checks that against what the register shows. The same is true of every commodity. She also totals the charge sales and checks the charge slips against the charge notations on the cash register ribbon. She also adds in the collections on account at any service station. The persons from whom collections were made are posted on the reverse side of the envelope together with any remarks that are to be made concerning any of the figures shown on the face of the envelope.

When these figures for each station each day are compiled, the amounts are transferred to a daily distribution sheet, which takes the place of a journal and cash book. On the face of the daily distribution sheet are recorded all checks issued and for what accounts, all invoices received; all cash received; all charge sales; discounts taken and allowed, wholesale and retail sales, and the bank deposit for the day. On the reverse side are spaces for journal entries; a daily general ledger trial balance, and merchandise purchases and transfers.

Envelope Is Filed

AFTER the cash register ribbon has been carefully checked and everything totaled and any discrepancies straightened out, the ribbon is put inside the envelope and, after the totals have been transferred to the daily distribution sheet, the envelope is filed away. It is the intention to file the envelopes, which give a summary of each station's business each day, for five

(Continued on Page 97)

(Continued from Page 96)

years, or until the expiration of the time when federal income tax inspectors may legally go through the records.

The envelope idea is that of Mr. Stansfield. He said he knew of no other oil company that might be using such a system.

Charge slips in both the wholesale and retail departments are made out in triplicate each copy being a different color. One of the copies goes to the customer, another is sent in daily with the day's sales record, and a third is sent to the customer at the end of the month with the bill of his month's purchases.

Tank wagon salesman make out triplicate slips with each sale, no matter how small. If the sale is cash he receipts slips and turns in cash for the amount. If the sale is a charge the slips are signed by the purchaser. Charge slips at service stations are signed by the purchaser and in the case of corporation customers, the corporation may know each month just which employe purchased the gasoline.

Gasoline used in tank trucks or by the salesmen in passenger cars all comes from the Pierce service stations. No filling is done at the bulk plant. Each tank truck driver or salesman must sign charge slips just the same as John Jones, the grocer, who has been granted credit privileges by the Pierce company. Instead of debiting a customer with the amount of the purchase, the proper operating expense account is debited.

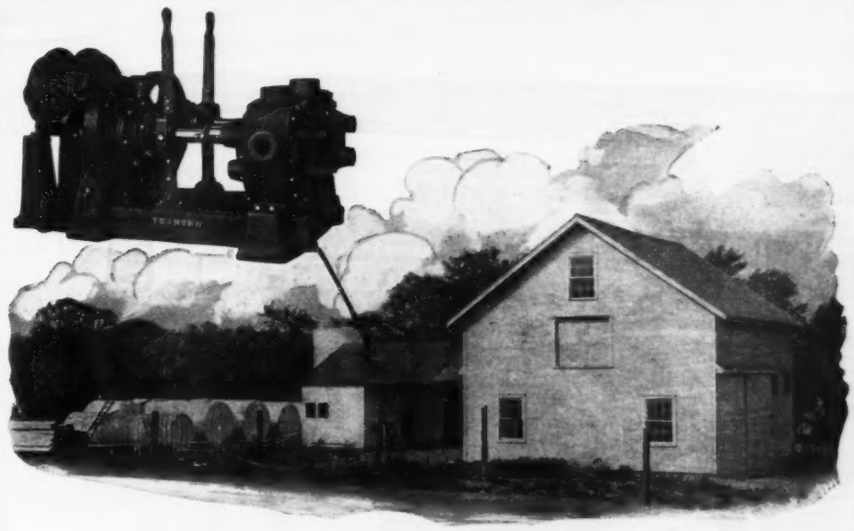
Tank truck drivers must account for every gallon of gasoline metered into their tanks. Should they run out of fuel gasoline on a trip and fill their fuel tanks from their delivery tanks, they would have to make out a tank wagon sales slip and probably explain why they ran out of gasoline. All charge tickets are numbered and all must be accounted for. Sales slips are made out on deliveries to Pierce stations and the attendant must receipt them.

How Tires are Carried

THE Pierce company is distributor in Akron and nearby territory for a large tire company. At its central station, the one that connects with its main office, a full stock of tires is carried as well as at its warehouse, but at the other service stations only the sizes in greatest demand are carried. Should another size be wanted quickly at any service station, the station salesman would find out the nearest Pierce station that had the particular size and send there for it. The station that had the size would make out a transfer slip which would be signed by the station salesman receiving the tire and the one would receive a credit comparable to a sale. Similar transfer slips are made out when a tire is to be used on one of the company's own trucks.

For a partnership or corporation little change in the method of the Pierce com-

(Continued on Page 112)



OWNERS of the largest or smallest refineries or bulk stations will find in Trahern *Rotary Gear* Pumps the solution of their pumping problems.
Trahern offers a variety of types, capacities and power arrangements which meet the demands of the petroleum industry.
There are Trahern Pumps for hand or power use; capacities ranging from 1½ to several hundred gallons per minute—always free from pulsation.
Ease of installation, efficiency in operation and low price are characteristics of Trahern *Rotary Gear* Pumps.

Write for catalog and prices

GEO. D. ROPER CORPORATION

ROCKFORD TRAHERN ILLINOIS.

for Tank Fittings

Vented Fill Pipe Cap
4 sizes

Water-tight Fill Pipe Cap

Holes in the cover provide a place for the lock, no matter how tightly the cap may be screwed down.

8 sizes

Air Vents for Underground Tanks
5 sizes

Flush-Floor Cap
4 sizes

Reducing Bushing double tapped
16 sizes

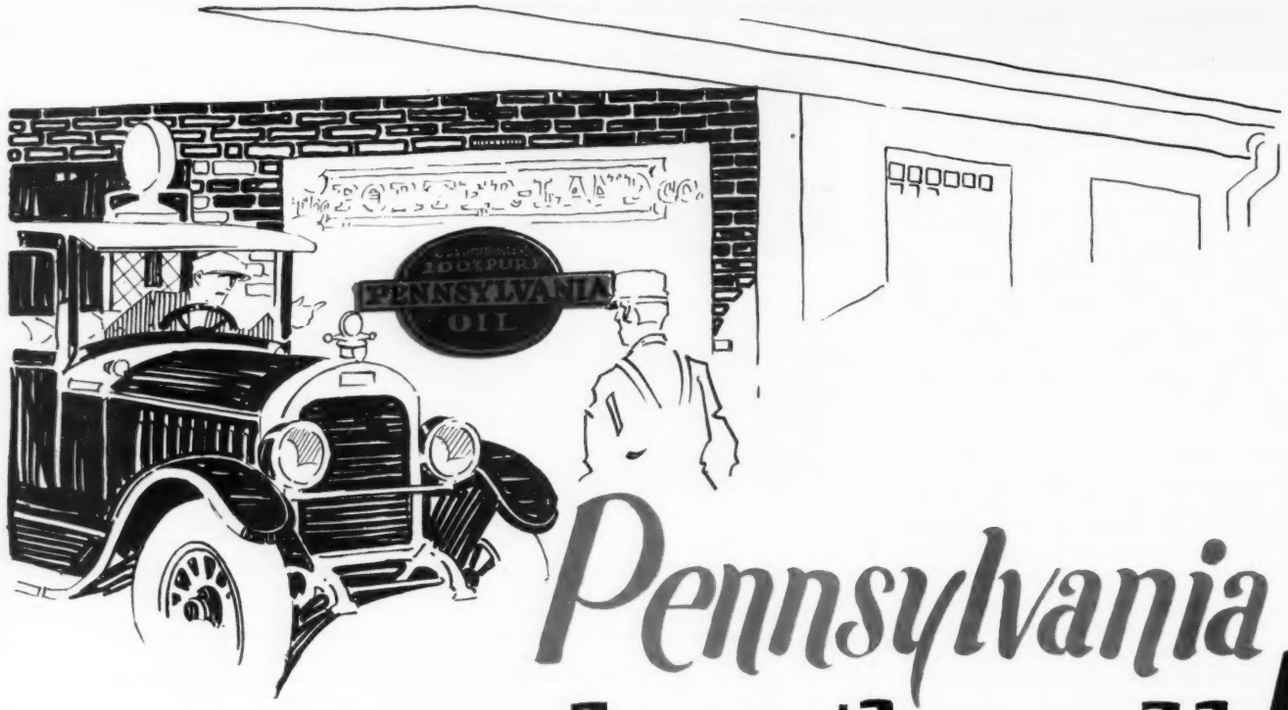
OIL jobbers, refiners, tank manufacturers and service station operators have all found that Des Moines Tank Fittings are low in price and lowest in yearly cost. Nearly all the large oil companies are numbered among our regular customers.

Every item in the Des Moines line is carefully designed and accurately made. Large stocks enable us to assure you of same-day shipping service on your order, from our factory or our nearest warehouse.

Whenever you need fittings, write, wire or phone for quotations on the quantities you require.

Des Moines Foundry & Machine Co.
DES MOINES, U. S. A.

Have Your Engineering Department Write for Test Samples



Pennsylvania has the call!

—blend your oil from Pure Pennsylvania and cash in on its popularity

Extensive national advertising has created a popular demand for Pennsylvania. The "100% Pure Pennsylvania" under your own brand makes sales easy. The road "has been paved"—why not use it?

OHIO VALLEY, SHARP STOCKS, present a distinct achievement in Refining Pennsylvania Crude. An exceptional low cold test, plus an exceptionally high fire test, enable you to offer a Pure Pennsylvania Product to meet every motoring requirement. Sharp Stocks blend easily at normal temperature without the aid of steam heat, by simple agitation.

Ohio Valley Motor Lubricants may be used straight, or as furnished, ready for blending. Blended, also to suit your own specifications.
See our chart of specifications.

Phone, wire or write for full information.

Ohio Valley Refining Company
St. Marys **W. Va.**

SPECIFICATIONS

No.	Gravity	Flash	Fire	Visc.	Cold	Color
2400	29/30	410	480	60	15/20	6
2430	28/29	430	500	70/75	15/20	7
2450	28	450	520	80/85	15/20	N

Ohio Valley

Sharp Stocks

PURE PENNSYLANIA FOR YOUR OWN LUBES

Intelligent Merchandising Need of Hour, Association Executives Say

By L. V. Nicholas
President National Petroleum Marketers' Association

THERE is no future in the oil business except a precarious, hand-to-mouth existence ending in disappointment and disaster, except it be handled on a straight business basis.

There are brilliant possibilities for the corporation or the individual possessing a true sense of values and the business acumen to steer a straight course and intelligently merchandise, with a view to earning a net profit.

The Independent jobber's place in the picture is economically sound and industrially secure—provided he is a business man, with a sense of values and of the eternal fitness of things.

It is an economic untruth that a refiner is better off to own his own stations than to market his products through the jobber. Instead of being economically sound, it is simply an expedient, the result of lack of inclination or intelligence on the part of the jobber and the refiner to sit down together as business men and look the facts in the face.

The business man engaged in the jobbing of petroleum products can accomplish for each dollar of invested capital what would require a dollar and a half to duplicate on the part of any of the larger integrated units.

During the past few years, the Independent jobber has shown very firm and definite determination to face facts and meet issues boldly and intelligently, and the future of any business man determined to do these things is always bright.

Conservatively, 30 per cent of the individuals and firms classing themselves as jobbers of petroleum products must go out of business.

First, because they are not business men, but, on the contrary, economic misfits who thought the oil business was less hazardous than bootlegging but equally profitable.

Second, because no possible price structure can provide margins of profit sufficient to keep them afloat.

This is not news to the industry. On the contrary, it is one of the encouraging facts that the business man engaged in the sale and distribution of petroleum products keeps constantly in his mind when battling with the present day demoralization.

The outstanding successes in the oil business—and I can point to hundreds of them—by an overwhelming majority have been attained by men who would have done equally well in almost any line of endeavor.

As the remorseless law of the survival of the fit eliminates the undesirables, just as surely and irresistibly will it broaden the horizons and advance the interests of the intelligent and courageous business man.

The days are numbered for oil men or corporations, large or small, who do not know their business and strive efficiently and intelligently to perform a service at a fair and commensurate profit. For those that do, the future was never brighter.

State Association Is First Line of Defense

By Charles M. Sutherland
Secretary Nebraska Independent Oil Men's Assoc.

THE march of progress in all branches of the petroleum industry has played havoc with our petroleum nomenclature, specifications and definitions. A noted petroleum chemist recently told us that 300,000,000 gallons might be added to the motor fuel supply of the public by a mere adjustment of specifications. The words, high gravity, high grade, high test and their antonyms long ago lost their first significance and are now daily misused and misconstrued.

In somewhat the same way, the words "Independent Marketer", have lost their significance, because they do not describe present conditions. Surely a jobber who bases his buying contract upon the price set by his largest competitor is not independent. With no voice in the price he makes to the public, he surely again fades from the picture as an Independent. Better call him an individual marketer looking for a place to light. You will recall a certain advertisement a little over a year ago in a Chicago paper in which the claim was made that there was only one Independent Oil Company doing business in the Indiana territory. This assertion has never been disproven.

Our present status as an Independent Marketer has been set forth by some eminent authorities as "what he ain't, rather than what he is." First he's the individual jobber—unorganized. Second, he's a marketer with no voice in the price structure. Third, he's a jobber with little confidence in his competitor. Fourth, he's a jobber groping blindly in the dark, either blissful in his ignorance or too lazy and indolent to inform himself or intelligently act. Is this a true indictment?

Three Classes of Jobbers

AS we study the facts and judge the present jobbers "by their fruits," the jobbers who do not dominate any of the eleven marketing territories into which the United States has been divided, we find they group themselves into three distinct classes.

Class A Jobbers. This group is independent in the ordinary sense of the word, and have connections with or are subsidiaries of companies who operate refineries and have crude productions. These are square marketers with their own sources of supply. Their marketing areas are inter-state in many instances.

Class B Jobbers. This group is the largest in number of any class. They have no refinery connections except as they contract from time to time with a source of supply. Their marketing areas are very limited. The majority buy upon the spot market. Not very many of them are in more than one state, but many of them cover several towns in the same state. These jobbers form the back-bone of the so-called Independent marketing industry. They are the local tax payers in their respective towns, the home town boosters, supporters of the civic clubs, lodges, schools and churches.

Class C Jobbers. This group, while not the most numerous, are the most troublesome. They are made up of side-line-artists, opportunists, failures-in-other-lines, retired farmers, retired shoemakers,

retired bankers, ex-tank wagon drivers, ex-equipment men and from every walk of life. Lured by a Will-o'-the wisp of getting rich quick, many have forsaken lines of business which they knew something about to engage in the oil business about which they knew nothing. To this class has been added the co-operative companies launched by some professional booster, who started a company, got his money, and then left the "new born infant" to work out its own salvation.

The position which the local marketer who conducts his business according to economic principles makes for himself in the community is going to be the bulwark for the entire industry. The public can be easily incensed against a big corporation, but they will often think twice before destroying the business of their fellow townsman, whose dollars, made off gasoline and oil, go to advance the interests of the town in which he lives.

This Home Town jobber should give his state association all support possible. The independent jobbers in a state will only take the place that is rightfully theirs in measure as they support their State Oil Jobbers Association. This is the first line of defense. We know for a certainty that, when the jobbers realize the importance of the state organization, they will in turn support the national association.

The Independent jobber must support the agencies that make it possible for him to exist. Otherwise the inexorable law of the survival of the fittest will drive him out of business. Let him be the "fittest" in his own community and he will survive.

Drive for Profits, Rather Than Gallonage

By James A. Gilmore
Secretary Michigan Independent Oil Men's Assoc.

THE importance of the Independent jobber and the place he is going to occupy in the future is a subject of vital interest to a great many people who have invested their money, time and energies in the Independent oil distributing business.

Would that my vision could permit me to peer into the future and see with an unerring eye what is in store for him. Would that I might be gifted with such keen insight as to make a prediction of such startling boldness that all would heed, and heeding, profit to their everlasting benefit.

We are only human, however, and humans can only surmise what the future may have in store for any business or any person.

Our prediction is that the place of any Independent jobber in the future is going to depend very largely on his source of supply. His standing with his source of supply is going to depend largely on his credit and his credit is going to depend largely on his manner of conducting his business.

The future—and not far distant—is going to see a very rapid weeding out of the unfit Independent jobbers. By unfit we mean those who neglect to establish accounting systems and thereby definitely determine their costs of doing business and the exact amount of their profits. We also include in this class those who are "hot after" gallonage that represents no profit, and those who are prone to believe, without investigation, the lies their customers seeking price concessions tell them about their competitors.

The "important" Independent oil jobber of the future is the one who drives his business NOW for profits instead of gallonage.

Roster of Oil Marketers' Associations

National Oil Jobbers Associations

American Oil Men's Association, Blum Bldg., 624 So. Michigan Ave., Chicago, Ill. Secretary and Manager, H. G. James.

National Petroleum Marketers' Association, Blum Bldg., 624 So. Michigan Ave., Chicago, Ill. President, L. V. Nicholas.

Active State Oil Jobbers Associations

Arkansas-Tennessee Oil Marketers Association, Secretary R. E. McKellar, Diamond Oil Co., Memphis, Tenn.

Independent Petroleum Marketers Association of California, Inc., 930-935 Rives-Strong Bldg., Los Angeles, Calif. Secretary and Manager, H. H. Maxson.

Georgia-Alabama Independent Petroleum Marketers Association, Secretary-treasurer, W. L. Moore, Wofford Oil Co. of Georgia, Atlanta, Ga.

Illinois Petroleum Marketers Association, Secretary-treasurer G. A. Primm, Sunbeam Oil Co., Springfield, Ill.

Indiana Independent Petroleum Marketers Association, Field Secretary, Sam T. Hurd, Connersville, Ind.

Iowa Independent Oil Men's Association, 225 Fifth St., Des Moines, Ia. Secretary, M. L. Long.

Kansas Oil Men's Association, 423 First National Bank Bldg., Wichita, Kan. Secretary, J. A. Motter.

Michigan Independent Oil Men's Association, 220 Ashton Bldg., Grand Rapids, Mich. Secretary, James A. Gilmore.

Minnesota Petroleum Association, 638 Builders Exchange, Minneapolis, Minn. Secretary, Paul E. Hadlick.

Association of Oil Jobbers of Mississippi, President R. C. Clark, Independent Oil Co., Tupelo, Miss.

Missouri Oil Men's Association, 627 New York Life Bldg., Kansas City, Mo. Secretary, George S. Allee.

Nebraska Independent Oil Men's Association, 416 Terminal Bldg., Lincoln, Neb. Secretary, C. M. Sutherland.

Independent Oil Men's Association of New England, Secretary I. H. Farrar, Berkshire Oil Co., Worcester, Mass.

New York State Petroleum Marketers Association, 1201 Salina St., Syracuse, N. Y.

North Dakota Petroleum Association, President H. M. Wilson, International Oil Co., Minot, N. D.

Ohio Petroleum Marketers Association, 616 Commerce Bldg., Columbus, O. Field Secretary, W. C. Hughes.

Oklahoma Oil Jobbers Association, 416 Fidelity National Bank Bldg., Oklahoma City, Okla. Secretary, C. M. Kinney.

Rocky Mountain Independent Oil Men's Association, 412 Commonwealth Bldg., Denver, Colo. Secretary, A. Overholtzer.

Rocky Mountain Oil & Gas Association, Montana Chapter, 222 Ford Bldg., Great Falls, Mont. Secretary, Walter F. Brittan.

South Dakota Independent Oil Jobbers Association, Secretary, Fred H. Buehler, Dacotah Oil Co., Madison, S. D.

Tennessee Independent Oil Men's Association, Secretary Tom S. Cooper, Estes-Cooper Oil Co., First St. & L. & N. R. R., Nashville, Tenn.

Texas Independent Oil Men's Association, P. O. Box 261, El Paso, Tex. Secretary-treasurer, L. A. Greene.

West Virginia Oil Marketers Association, Secretary D. E. Frierson, Frierson Equipment Co., Charleston, W. Va.

Wisconsin Independent Oil Jobbers Association, 815 Gay Bldg., Madison, Wis. Secretary, R. A. Overholser.

BOYS
-Speed Service-Cut Costs

HERE again Bennett Intensive Specialization and immense production creates an easily discernible "plus" value—a perfection in design, a perfection in mechanical detail and a perfection in dispensing service that comes from continued concentration upon the single problem of "lube" marketing and the developing of best means for merchandising all "lube" products. Bulletins cover each oil and grease equipment need.

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MANUFACTURERS OF

PACIFIC COAST REPRESENTATIVES
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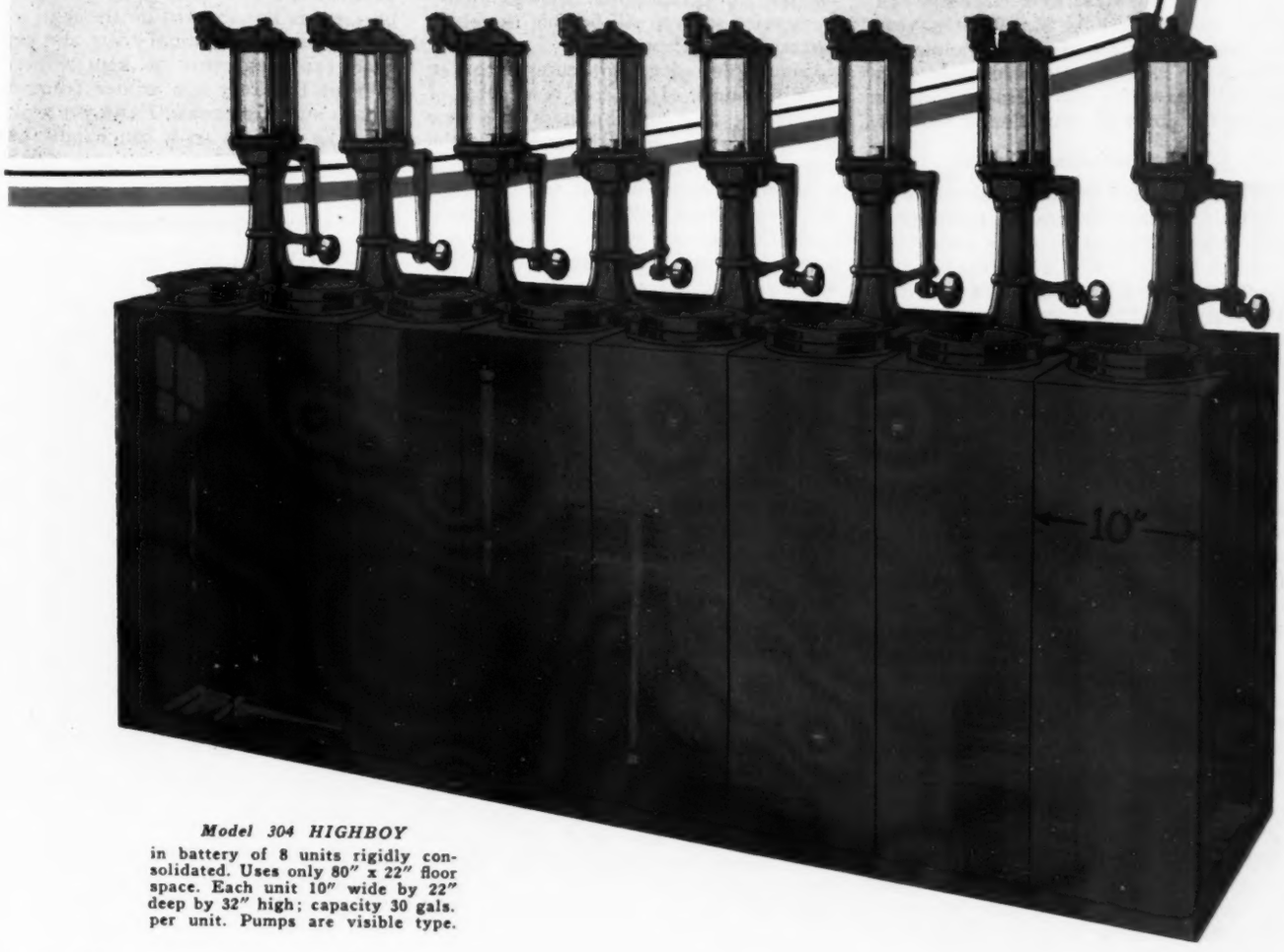
OIL & GREASE Hand Pump *EQUIPMENT*
"BEST BY USERS TEST"
Muskegon, Michigan
Branches in Principal Cities

PACIFIC COAST REPRESENTATIVES
Stephens Sales Company
Portland, Oregon
Seattle, Washington



Model 304 HIGHBOY
in battery of 8 units rigidly consolidated. Uses only 80" x 22" floor space. Each unit 10" wide by 22" deep by 32" high; capacity 30 gals. per unit. Pumps are visible type.

Auto Laundries Limited in Profits But Attract Oil Trade

By Ward K. Halbert
N. P. N. Staff Writer

CHICAGO, May 15

WASHING automobiles is coming to be looked upon as a proper function of gasoline filling stations in Chicago. Some of the best stations in the city have installed "automobile laundries" during the last winter and the number is increasing every week. By no means the majority of stations here have them. None of the really big marketing companies has gone in for washing cars, but smaller Independents and individual service station owners are adding them to their equipment at a rate that makes laundry manufacturers think they have found a fertile field for extension of sales.

The situation viewed broadly is about as follows. There are roughly 500,000 automobiles in use in the city. Persons who have washing equipment for sale say these cars will average one trip a month to the cleaner. The average charge per car is $2.50 a cleaning. In other words there is $6,000,000 a year to be spent for cleaning automobiles in Chicago. That is a considerable sum and will stand for considerable dividing before the point of saturation is reached.

Many Individual Dealers

THE classified telephone directory in Chicago shows there are upwards of 600 service stations in town owned by persons having no bulk storage, and in most cases not owning even a truck. Probably most of these stations have telephones so the list in the classified directory is thought to be accurate. This is wholly exclusive of the stations owned and operated by Standard, Sinclair, Roxana, Agni, Apex, and other well-known distributors.

Inasmuch as the big companies do not seem to be interested in the car washing business, the manufacturer of automobile laundries (whose sales efforts heretofore have been concentrated on the garage trade) are centering on the 600 odd privately owned and privately managed stations. One laundry manufacturer claims to have placed 25 such plants with filling station men already; another says he has sold a dozen, and probably others have sold enough to bring the total to 50.

Demand Is Increasing

OIL men that have laundries and those that have not yet installed them but intend to do so, are not afraid of competition. They say there is washing business aplenty, to the extent that competition will make business better for a while at least. Frequent automobile washing is not the general practice among motorists now, they say, but every man who forms the habit of regularly having his car washed will spread the idea among his friends and neighbors.

Figuring prospects in the business can not be done except in the realm of speculation at this early stage. But here is one especially optimistic thought: even if 500 of the 600 privately owned stations in Chicago install car washing equipment, it is not likely that the big oil companies will ever follow their example. So there are 1000 cars apiece for the private oil station men to draw their business from. They will have to compete with the garages for the business, of course, for garages have been washing cars a long time. But the oil station does not have much trouble in meeting garage competition. Undoubtedly the service station will be able to get its share of the patronage.

Competition does not enter into the question much. It seldom is a factor of importance in a new business or a new branch of a business. Nevertheless the car washing enterprise has its hazards. It is not an easy business to make pay. All has not been well with the car washers in Chicago and some of them are not timid about saying so. It is a fact that some of the pioneers in the business here have lost money. And the later comers are frank to say they have to watch the business closely to make it pay.

A Treacherous Game

NOT unlike the oil marketing business itself, the weather is one of the ruling factors in getting trade at a laundry. Motorists may drive their cars in bad weather; they may be obliged to do so, but they are not inclined to have their cars "dolled up" in bad weather. Who wants to drive a freshly shined automobile into a muddy street?

The fact that the car washing business dwindles to nearly nothing when the weather is bad, gives an advantage to the man who owns a small plant. When there is no business for anybody, the plant with the smallest overhead is the one that is least hurt. When the weather is fine the small plant turns trade away but experience has shown that big plants do the same thing. And when the weather is only tolerable and business is only moderately active, a small plant may be operating to capacity and making money while the bigger competitor is still doing business at a loss.

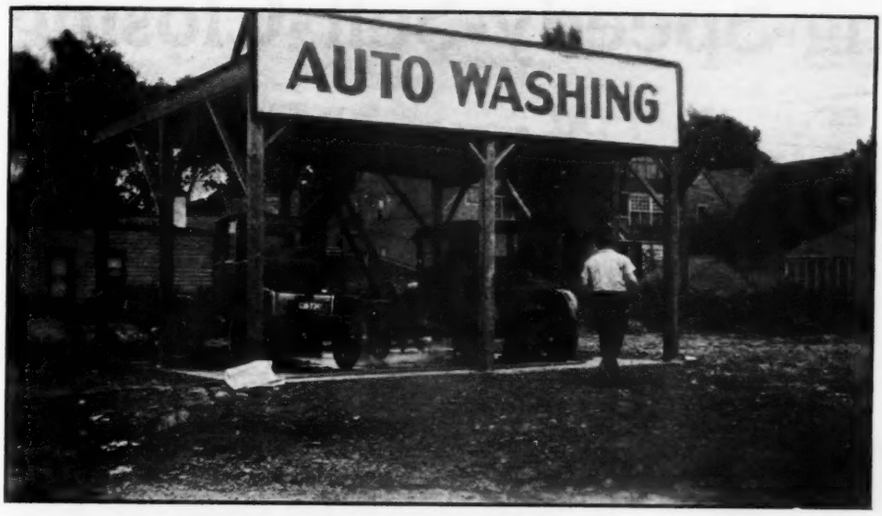
Only a few of the men who pioneered the business here in Chicago were oil men. In nearly every case they were managers of big garages or else started car washing establishments as a single enterprise. In several instances, at least, these were big establishments. If motorists in this region had been sold on the importance of having their cars washed, even these first big plants might have prospered but they were forced to suffer as pioneers often do.

The car-washing business, as a business, migrated here from California where the washers learned little that would help them in this climate. Where the weather is fine the auto laundries do not have to be housed so expensively, and where the good weather is fairly uniform all year the irregular run of business is not so hard on the man with money invested. Initial costs and overhead expenses must be kept down to prevent the long idle winter from eating up summer profits. And yet a plant must be efficient so it can handle business fast when the seasonable demand comes.

Small Towns Interested

ALTHOUGH auto laundries had been established in Chicago a while before they spread to outlying towns, they are being taken up by oil men in the smaller cities. Men pushing their distribution predict more prosperity for the small town washer than the Chicago people have enjoyed. They say the small town business man has smaller lease values to tax him, has more advantageous labor conditions and will enjoy a better patronage in proportion to the population. The average small town automobile is as large and handsome as the average city car; the wealth is more evenly distributed and motorists are just as vain of their cars; the same scale of prices for service can be maintained in small towns as in the city and, most important, small town folk drive their cars more because traffic conditions are better.

Independent service station operators in Chicago have been easier prospects for the salesman of car washing machinery than the small town jobber. The reason is clear to those who know the Chicago situation. The whole trouble is there are too many filling stations in



This automobile laundry is as simple a type as could be built and used in a northern climate. As it stands here it washed 100 cars a week in Chicago during the summer of 1925. It stood on the back of a filling station lot in a residential district.

Chicago and have been ever since the summer of 1923 when over-production of gasoline and wide margins increased competition. Gallonage is so divided now that gasoline sales will not carry a Chicago filling station, unless it has an advantageous location. A great many oil station men in the city have too much idle time on their hands and too small a return on their investment. So they are anxious to take on some profitable line that will more fully utilize their time and space.

The Price Sheet

NOT all of the oil dealers in Chicago who have gone in for car washing have figured their costs. Those who have small laundries do not charge themselves anything for the space their laundries occupy because, they say, "the space was there before." In other words they are allowing a share of the overhead of the laundry business to rest on the oil business which is all right and economically sound where it is taken on as a side line. But here are the basic figures as they obtain in Chicago:

Uniformly, the washers charge $2 for an open car and $2.50 for a closed car (except Fords) for a complete washing job with no extras. Fords have a special rate, $1.75 for an open car and $2 for a closed one. Nearly every washer charges 50 cents extra for polishing nickel trimmings on an automobile and all place an additional charge of $1 on washing a car with wire wheels. As a general thing the motorist is not at all "tight" about paying for the extras, and some washers claim they have an average intake of $2.50 per car entering the laundry. Others cut that average down, some estimating as low as $2.25.

Labor costs are almost as uniform. Union washers get $35 a week for six 10-hour days with time-and-a-half for overtime and Sundays. Oil men in Chicago might as well not consider other than union washers for if they employ unorganized help they are sure to have trouble with their service station men who belong to an older and better organized union.

Establishments Sectional

REGARDLESS of the brands and trade marks, which are varied, there are three varieties of automobile laundries to be had. Any individual operator can employ any system or any solution he may desire for shining trimmings and polishing body finish, but he must select one of three kinds of cleaning machinery. They are (1) water and air systems costing $1,500 and up, (2) steam pressure systems that cost around $1,000 and (3) the high-pressure spray pumps that may be figured down as low as $400 or $500, using water only. Housing the plants is a matter of personal taste, or what the community may demand. There seems to be a practice in Chicago to spend about as much for the house as for the machinery.

The foregoing figures are for single units. Such a plant can operate at capacity with eight or 10 men; it is possible to run one of them with only one man, and the ordinary run of business can be handled with two or three men, if they are good.

The manufacturers of machinery are never insistent upon selling large units where they think a small plant will do the work. They would rather see two small, competitive plants a few blocks apart than one plant too big, because the overhead is distributed. Moreover two separated plants will get more business than two under one roof, because they are convenient to more people and are seen by more people.

Two Men's Experience

The experiences of two men in Chicago have been selected for the reason that they have done their work so differently and both are fairly well satisfied with their propositions. The men are Matt Petersen of the Reliable Oil Co., 4254 Fullerton Ave., and Jacob Meyer, Grand and Kedzie Aves. Both have owned their laundries for nearly a year.

Mr. Petersen is in a residential district on the northwest side of town, a district not rich but prosperous. There is a lot of spirit and pride in the neighborhood where nearly every resident owns his own home. Mr. Meyer's place is just beyond the industrial and wholesale district, north and west of the "Loop." His customers are drivers of heavy duty trucks, to whom speed and convenience mean much and appearance little.

Mr. Petersen's first consideration was a community for him to please and satisfy. He was prompted to build an auto laundry by the neighborhood chamber of commerce. That body did what amounted to telling Petersen, "Car service is in your line. Go ahead and arrange to take care of us," and Petersen did. But because of community pride he spent $7,500 for his equipment and a house to put it in: one that would please the senses of the most fastidious.

The place occupies a back corner of a big corner lot that is almost square. The service station is almost in the middle of it and there is plenty of room in front for two drives. The station is large and carries a line of automobile accessories and tires. A car desiring washing service enters the lot from Fullerton Ave., and is driven straight into the place. The laundry is equipped with every car washing convenience a small unit needs.

Could Make Speed

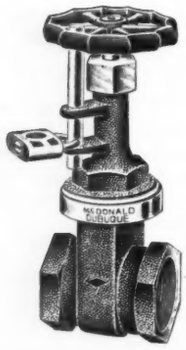
IF the trade demanded it Mr. Petersen could work eight men at this laundry as follows: One outside in front of the building, blowing out upholstery with air pressure, two in the pits washing chassis with pressure hose, two on the platform washing and sponging bodies, two men behind the building to dry and touch up with oil, and one man with them polishing nickel. He has the equipment and he has the space, but the traffic will not bear the expense. He works two men.

Petersen employs two negro washers and pays them above the union scale because he demands that they be efficient Eight men like the two he has, could turn out a car every six minutes. Under present conditions the two men turn out a car in 30 minutes working steadily and have been known to rush one through in 17 minutes.

How Mr. Peterson overcame the annoyance of a long waiting line is an interesting story. At first he tried to operate seven days a week like most automobile washers do, but the men wanted a day off out of the week and he elimi-

Quick Acting-Speedy-Self-Closing

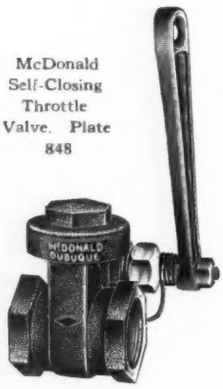
McDonald Tank Wagon Faucet



McDonald Lock Gate Valve Plate No. 846—Patented 8/10/1920

McDonald Duplex Oil Tank Vent. Plate 834. Patented 1/3/1911

McDonald Self-Closing Throttle Valve. Plate 848



"Pistol Grip" Self-Closing Hose Nozzle. Patented 3/9/1926.

YOU want the many practical advantages offered by McDonald Self-Closing Tank Wagon Faucet. Its positive closing means elimination of waste. Easy to handle—can be held one-third, two-thirds or fully open as desired. Full size opening gives speedy delivery. Disc will positively not swell in gasoline—flow is not retarded. Hose end renewable if threads become worn. Easy to lock. Lasts a life time. Insist on McDonald Faucets and get the best.

Write for sample and prices.

The Home of the Swing Joint

A. Y. McDONALD MFG. CO.

Dubuque, Iowa

Omaha — Minneapolis — Kansas City, Mo. — Des Moines

Theres A McDONALD Distributor Near YOU!

Self-Closing Tank Wagon Faucet

Our Plate No. 842

Sizes 1½" and 2".

McDONALD

ated Sunday, in spite of the fact that Sunday was the busiest day. Then when business began to stack up on Saturday instead of raising prices on that day he assumed the job personally of talking to the customers with the idea of educating them to have their cars washed during the week. Here is about what he told them:

"Mr. Blank, if you are in a great hurry for your car we will rush it through but if you don't want it until tonight it will be a great favor to us here if you will leave it and let us run it through last. Everybody seems to be in such a rush on Saturdays. We really can't do our best work under these conditions. There is not a great deal of profit in this business and we can't keep a force here all week to take care of the Saturday rush." (Then whatever the answer is) "All right, sir, we will take care of you that way this time and do our best. But you will be better satisfied if you can arrange to come by some time toward the middle of the week."

Neighborhood people, to whom Mr. Petersen has to look for his patronage very largely, have become accustomed to this now. He sometimes turns away five or six cars on Saturday. And on Sunday, when only gasoline and motor oil is on sale and the wash rack and greasing rack are closed, he turns away 10 or 12 applicants for car washing. They are mostly transients and do not represent a permanent loss of business.

Attracts Other Trade

"WE do not work in a rush," Mr. Petersen said. "We aim to turn out a good job. We have to hold to the price schedule. Some jobs take much longer than others but we charge the same for the same class of cars. If a car needs it we go over it and take off the worst spots by hand after it comes out of the laundry. I have a card file of our regular laundry customers and fully a third of them now are outside of this neighborhood. Some of them come from 15 miles away.

"I figured this down as close as I could with the experience I have had. We know our costs on city gas and electric current, boots and aprons, brushes and sponges, soap and kerosene, labor and overhead. I don't care to tell too much about it, but with two men working at the job, and the average car bringing in $2.30 per washing, we have to have 10 cars a day to break even. Those two boys have put through 25 cars on a Saturday occasionally but I don't think they could keep up the pace very long.

"These same two boys are always here. One week last winter we had only six cars in the laundry. The boys didn't do anything much but shovel snow. They work hard Saturdays and take their Sundays off. Extra men used only Saturdays and Sundays would not value their jobs and would not do good work. If I made an extra charge on Saturday and Sunday to cover the extra cost, it would not be fair to my customers who come here regularly and occasionally wanted service on week ends. I think this way is best. We take care of our regular customers, attract trade to the pumps and greasing rack, get mighty few complaints about the work we do and make a profit of 15 or 20 cents a car."

Mr. Meyer's Way

IN Grand avenue, where the tenement and wholesale districts converge, there is no neighborhood to be pleased. But Jacob Meyer knows his trade and strives to please them. He has a five-pump service station, a single unit laundry and a greasing rack on an almost triangular lot 125 feet long and 50 feet across the wide end. Altogether it works six men in summer. With all this he has parking space sufficient for 30 automobiles, but never uses it all.

The idea that numerous cars are brought to an auto laundry and left there all day to be washed, is pretty much of a myth. In Chicago, at least, most cars are driven to the place and the driver remains there until the work is done. This will not probably hold good in smaller towns.

Mr. Meyer paid $1,000 for his washing equipment installed and another $1,000 for a sheet metal building to house it. He works one man on the wash rack all week and two on Saturdays and Sundays. His one regular washer is a negro who draws more than the union scale and bosses the job when he has help. When there is not enough business at the laundry to keep him busy, he takes a hand at the greasing rack or on the pumps, and occasionally goes out to the pump island and solicits business from whatever gasoline customers appear to need their cars cleaned up.

Mr. Meyer installed the laundry early last fall. During the open fall he learned that the business was profitable especially because laundry customers usually bought oil or gasoline before they left. He says he can figure $2.50 for every car that drives on the wash rack. Two men can put 30 cars through the laundry in a day, he says, but that volume of business seldom develops except on Saturdays and Sundays in summer, and on days before holidays.

Closed for Winter

WHEN business fell off Mr. Meyer closed his laundry for almost three months. The plant was not operated in December and January. Even the head washer was laid off. The place was reopened for business late in February. In the first month in the spring Meyer handled 150 cars in the laundry. He asserts that he would not be without it so long as it breaks even.

"It is just as well to close up a place when it does not pay," Mr. Meyers says. "Let the business go to somebody who can operate at a profit. It is easy to start up again when the rush comes. Washers are easy enough to get. My regular man is glad to come back. I don't know what my extra man does the rest of the week. But extra men charge $6 a day and some of those colored boys would rather work two days for $6 than three days for $5. That is their disposition."

According to a salesman who canvasses the automobile laundry trade, the most prosperous establishments around Chicago are in the outskirts on national highways. Most of them close in winter and open up to take care of the tourists. "Tourists like to have their cars cleaned, oiled, polished and dusted before they drive into the city," the salesman said. "I advise any oil man contemplating installing a laundry to locate it on a national highway."

Big Plants Suffer

SOME of the early builders of car washing establishments in Chicago, modeled their plants after California places and spent as much as $60,000 or $75,000 on them. The plants housed two or three cleaning units and were advertised extensively. Some of these plants are said to carry an overhead of $20 to $30 a day exclusive of labor.

These big plants are unable to effect many economies in rush time that cannot be duplicated in small plants to a proportionate degree. They employ bigger forces in rush times and have more labor troubles. If one is capable of cleaning 250 to 300 cars a day it must clean at least 100 in order to operate profitably. A small plant, with a reasonable amount of publicity, can attract as much business in slow times as a big plant can. It will therefore operate at capacity more days out of the year. And in winter when no laundry can expect to get more than one or two customers a day, the heavy overhead is devastating, whether open or closed.

An oil jobber in southern Illinois visited Chicago auto laundries a few months ago with the idea of building one in his town. After the survey he did rather an unexpected thing. He arranged to buy a rather extensive lot of equipment and an expensive building. He declared that small town conditions would protect him from most of the disasters of the big plant in the city. Labor troubles would be less, ground values would be less, building cost might be a little lower, and withal his overhead would be lower than a city plant of like size.

He considered a single unit would not care for his requirements; that he could build one big one cheaper than two little ones; and he believed by advertising in newspapers (which is prohibitive in cost to a city man with a small business) he could educate his trade and distribute the peak load of business over the week, like Mr. Petersen has done by word of mouth in his urban neighborhood.

How the Individual Marketer Can Make Better Use of Advertising

By Warren C. Platt
Editor

ADVERTISING is an increasing force in oil marketing today. The industry has just begun to learn how to use it.

Through advertising the big companies are impressing on the public not alone the quality of their goods and the universality of their service, but the size of their investment, the large number of fellow Americans in their employ, and that oil is another of America's big and faithful industries.

The smaller companies, through advertising, are showing the public that the big companies are not the only ones in the oil industry, that there is the hardest kind of competition from the smaller companies, that their service likewise is universal and their products excellent and that they too, in total, represent a tremendous investment with hundreds of thousands of other fellow Americans in their employ.

The advertising of the individual oil companies today is some of the best publicity that can be had on behalf of better relations with the American public. A few more years of it and some of the industry's public relations' problems will not be so acute. The least it will do will be to inform the public in the most convincing way possible that there are many oil companies all hotly competing to serve the public.

For the individual oil marketer, the Independent, advertising is doing nothing short of the miraculous. It is making a powerful, national factor out of his numbers and yet preserving to him and to the public, his own individual characteristics.

Alone in the Picture

UP to the present the average Independent Home Town Oil Co. has appeared to the public much the same as an abandoned child on its doorstep. It was small, none too husky in appearance, possibly a bit shy on paint and had no apparent connection with any one in town or out. It was the typical orphan and as such solicited business. Even when the local Independent put up a good fight, with good products at reasonable prices, and built a big business, he was not recognized by the townspeople as anything more than an orphan, completely unattached to anything large and stable in this world. His source of supply was always a mystery, and often suspected of being one of the big integrated companies that also had a local station.

That there could be thousands of Independent oil producers and several hundred big well-equipped refineries off in the distant oil fields, which, with the local companies, represent a far bigger investment than any one of the big companies, never was known by the townsfolk. That these producers and refineries were absolutely dependent, despite all their hundreds of millions invested, in the welfare of this forlorn looking little Home Town Oil Co., its two or three tanks and several small trucks, was foreign to the minds of its customers.

Then came the advertising.

An idea of what the facts are is steadily trickling into the minds of the American people. The public is coming to realize that the Home Town Oil Co. is small because that is all there need be of the Independent oil industry in their town; but that there are Home Town Oil Companies everywhere, backed with the vast resources of refineries and oil fields way off in another state, and that collectively these represent highly efficient factors in the oil industry.

Benefits Entire Industries

WHILE the bigger companies are undoubtedly having a harder battle for business, and maybe are losing some, this advertising by their competitors is of great benefit to them politically, for it removes from their shoulders the suspicion of years that they are all there is to the oil industry and hence the oil industry must be a trust, a conclusion the average American easily came to in the absence of any substantial proof to the contrary.

This advertising also has aroused the respect of every one in the oil industry, including the employes in all companies, for this Home Town Oil Co., a respect which is making for much healthier and open competitive conditions, a respect which is putting the men of the bigger companies on their toes as they probably have never been before.

Undoubtedly, if the writer may advance an opinion from nearly 18 years' observation of the oil industry, this new era, largely represented by advertising, is shaking the industry down to a survival of the fittest, yes, but a survival to be decided by merit in a fair fight; a survival for which the Independents are fighting with the added strength of this advertising, which in practical effect puts them at least on a parity with the larger companies.

Was Necessary Reinforcement

IN previous highly competitive periods —and be it known to the newcomers to the industry that they come every few years the fighting has been rather one-sided because the Independents stood before the public as unattached units. While they received the public's sympathy, as one might call it, the public had little confidence in their length of life. The public also only patronized the Independent it knew which was in the home town. But in today's battle, the Independents have brought in the one reinforcement they were formerly lacking, the advertising which makes them a solid unit the country over, invites the patronage of the home town customers wherever they may tour, and encourages their own organizations to greater effort than ever before.

Advertising can hardly be given too much emphasis in the competitive battles of today. While that battle may seem unduly severe in places, and while there may be some fatalities even among some of the larger companies, there will be far less damage than any hard pressed oil marketer may think today; for from it all will come more efficient investments and methods resulting in lower costs and narrower margins with more modest but healthy profits—profits whose modesty will be such as to inspire the highest respect from a possible new entrant into the oil business, a respect that will cause him to keep out unless he feels confident that he has enough hard work and gray matter in his system to come in and, with a few new wrinkles of efficiency possibly, make a real place for himself in the business.

Can Take Advantage of Campaigns Already Carried On

MORE than a dozen lines of petroleum products that are either nationally advertised or advertised over a wide stretch of country, are offered the Independent oil marketer today. They tie him up in a single marketing unit the

country over. The advertising campaign have all been born, at least in their more national character, within the last several years. The marketer can enjoy the benefits of any one or several of them, at little or even no direct cost to himself. The owners of these national lines will also teach the jobber how best to operate with them, how to sell them, how to "tie up" to them and supply him with all kinds of advertising helps.

All of this is something the marketer of ten years ago never had, and which few marketers of even five years ago enjoyed.

These national lines of oil products permit the marketer to have some of the best possible sales and advertising advice in the world, advice he couldn't hope to get on his own account, almost no matter how large he might grow as a local oil man. Some of the best paid and most skilled salesmanagers in the country are operating these lines, and the advertising is planned and written by the leading advertising agents and men of the country—which means the world. Some of the biggest and also some of the best advertising agencies in the world have had their most expert merchandising and research men and copy writers studying the problems of oil marketing for several years now. What they are giving their clients in the oil industry is just as good as what they are giving their clients among the automobile manufacturers, the makers of talcum powders and soap, roffing, etc.

Never before has the oil industry received such expert sales and advertising counsel—and it all is available to the smallest marketer for only a few dollars a month or, in the case of some lines, almost for nothing.

Two Classes of Campaigns

THESE campaigns are divided into two classes, co-operative and private. One of the co-operative and most of the privately owned campaigns apply only to motor oil, but they have a beneficial effect on gasoline, and the standing of the local marketer, which is not to be ignored.

The two co-operative campaigns are worthy of most favorable comment because they have come from branches of the oil industry of which it long had been said it was impossible to ever get them together and, if one did succeed in congregating them in a hall, they wouldn't put up any money for a common cause.

Those two campaigns are the Independent Oil Men of America of which L. V. Nicholas is father and president and the Pennsylvania Grade Crude Oil Association of which R. J. Alexander is secretary and manager. The former is supported by Independent oil marketers now numbering many hundreds and the latter by oil producers and refiners of the Pennsylvania, oil producing district. Both are running space in national advertising mediums and sup-

The Gulf Refining Company of Pittsburg, is reducing the cost of oil delivery by using The Ohmer Odometer on its fleet of trucks.

Reduces Cost of Oil Delivery

The Ohmer Odometer is infallibly accurate under all conditions. It counts the miles your oil trucks travel and provides you with mileage totals that enable you to cut delivery costs.

It spots the truck that is wasteful of fuel, that is hard on tires, that has excessive repair bills, that is operated by an inefficient driver.

Built for Rough Service

It is built especially to give accurate mileage totals on heavy-duty vehicles as well as on light vehicles. It withstands the jars and jolts of hard driving over car tracks, broken pavements, and rough roads. It is positive in its operation because it is driven from the transmission. Its mechanism travels with only one-sixteenth the speed of an ordinary speedometer.

It is simple in design, with an unusually small number of moving parts. It is ruggedly built, resists wear, and gives years and years of care-free service.

LOOK FOR THIS SIGN

AUTHORIZED SALES AND SERVICE OHMER PRODUCTS

It is easily and quickly installed wherever you want it—on dash, floor, seat support, or outside frame. And wherever placed, the figures are easy to read because they are large and always in perfect alignment.

Get all the Facts

These are just a few of the reasons why the Ohmer Odometer is winning the favor of operators of heavy-duty trucks. And in addition, it is backed by the largest manufacturer in the world of mileage and fare recorders. That is your guarantee for unequalled quality and performance.

Let us show you how economical it is to install and how it will help you reduce the cost of oil delivery. Let us send you a copy of our free book entitled "Horse Sense," giving a simplified system of truck cost accounting. There is no obligation. Write today.

OHMER FARE REGISTER CO.
Dept. H, DAYTON, OHIO

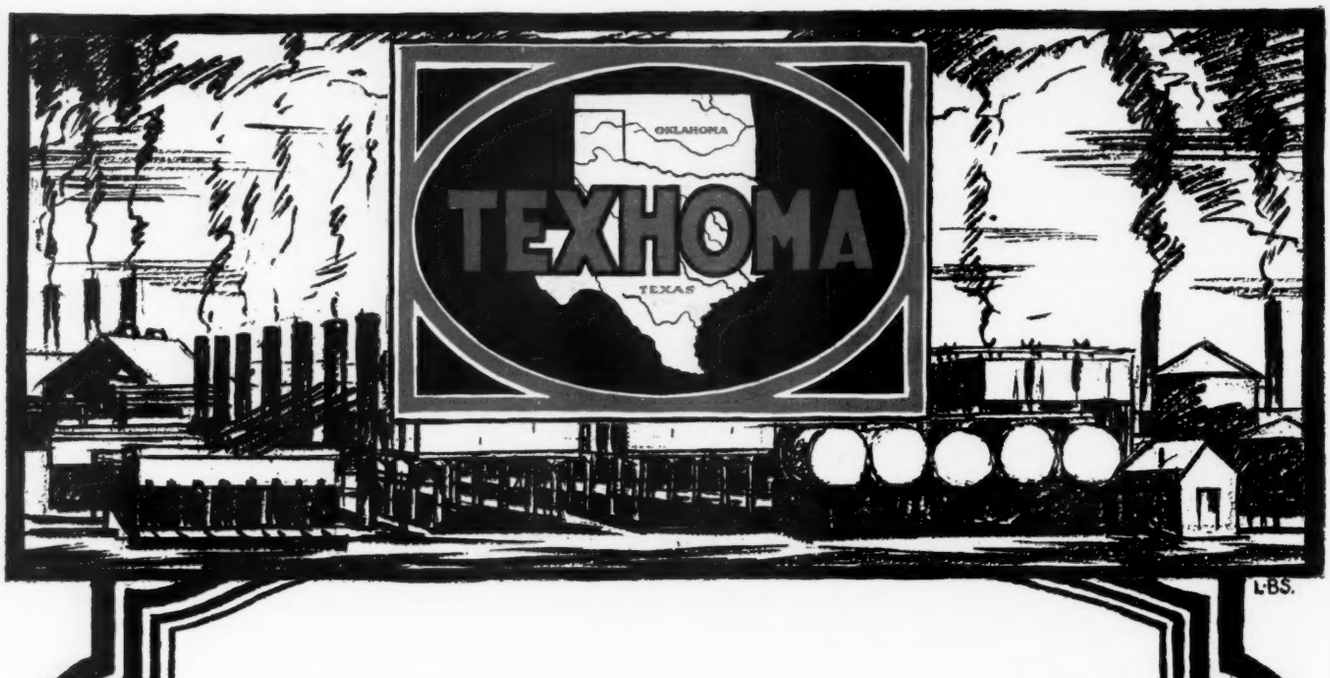
OHMER
REG. U.S. PAT. OFF.
ODOMETER

LUBRICATION

"Friction, Lubrication, Fats and Oils", by Emil P. Dieterichs, is an inexpensive little book that contains valuable information on the manufacture of lubricating oils, solid lubricants and greases, together with numerous formulas; modes of testing oils and the application of lubricants.

Send us your check for $1.50 and we will mail a copy of it to you.

National Petroleum News
802 Caxton Bldg., Cleveland, Ohio



Do you want—

Quality, Service, Dependability

—then you want TEXHOMA!

Texhoma Petroleum Products are not only made to serve—but to sell! They have quality that holds business—yes, and quality that GETS business! And there are few if any that equal Texhoma Service—with none that excel Texhoma Dependability! We have just the products YOU need to speed up summer sales. Texhoma Gasoline, for instance, has the anti-knock qualities that are so much in demand right now. It is also THERE with the power! Let Texhoma Products make YOU money THIS season. Wire us now for prices.

TEXHOMA OIL & REFINING CO.
WICHITA FALLS, TEXAS

TEXHOMA
PETROLEUM PRODUCTS-

plying sales help to their members and licensees.

The oil marketer's co-operative campaign, because its plans include all petroleum products the country over, with members in every territory, each with a bulk station in every town, is one of the largest advertising ideas ever developed. It has only started, but already is approximating in money spent some of the other famous co-operative campaigns, such as that of the various California fruit industries. Mr. Nicholas has a special organization to show his members how to get the most out of the campaign and to see that they are properly equipped with all manner of sales helps, signs etc. Ray Shaw is in direct charge of the advertising campaign.

The Pennsylvania Grade Crude oil campaign covers only motor oil. It has developed a number of what might be called sub-motor oil campaigns, that make use of the general master trade mark for Pennsylvania oil, but emphasize their own brand.

The various advertising campaigns of which the marketer may avail himself are:

List of Campaigns

INDEPENDENT Oil Men of America advertising and merchandising branch of the National Petroleum Marketers Assoc., 624 S. Michigan Ave., Chicago, Ray Shaw, advertising counselor. General advertising and merchandising of gasoline and motor oils.

Pennsylvania Grade Crude Oil Assoc., Chambers Bld., Oil City, Pa., R. L. Alexander, secretary and manager. National advertising and dealers' helps on various brands of lubricating oils made from Pennsylvania grade crude oil.

Pennzoil Co., Oil City, Pa., National advertising and dealers' helps on motor oil, tied up with the campaign of the Pennsylvania Grade Crude Oil Assoc.

Quaker State Oil Refining Co., Oil City, Pa., National advertising and helps for dealers on motor oil, tied up also with the campaign of the Pennsylvania Grade Crude Oil Assoc.

Tide Water Oil Sales Corp., 11 Broadway, New York City, Newspaper advertising and dealers' aids on branded gasoline and national advertising and dealers' helps on motor oils.

Marland Refining Co., Ponca City, Okla., General advertising and merchandising help for local dealers on Marland products.

Sun Oil Co., Phila., National advertising on lubricating oils and helps for local dealers in gasoline and oils.

Indian Refining Co., Lawrenceville, Ill., National advertising and general merchandising plan for local dealers on motor oils.

The Texas Co., 17 Battery Place, New York, National advertising on motor oils and dealers helps on oils and gasoline.

Miller Petroleum Co., Insurance Bldg., Kansas City. Special campaigns for local dealers on branded gasoline and kerosene.

Cities Service Oil Co., New York. Helps for local dealers on products of Empire Refineries, Inc., Tulsa.

Roxana Petroleum Corp., St. Louis. General helps for dealers on gasoline.

Sinclair Refining Co., New York. Helps for dealers on motor oils.

Pure Oil Co., Columbus, Ohio. Helps for dealers on lubricating oils and light oils.

Valvoline Oil Co., New York., National advertising on lubricating oils.

W. H. Barber Co., Minneapolis, Advertising and merchandising helps for dealers on motor oils, gasoline, kerosene and distillate.

White Eagle Oil & Refining Co., Kansas City, Mo. Dealers' helps on motor oils and gasoline.

Louisiana Oil Refining Co., Shreveport, La. Dealers' helps on motor oil, gasoline and grease.

Ashland Refining Co., Ashland, Ky. Local newspaper advertising on gasoline, in limited territory.

Suggestions to Local Independent Starting to Advertise

HERE are a few simple suggestions by following which any oil marketer, no matter who he is or where he is, may start advertising now.

These are not written for the company that should spend many thousands of dollars a year in advertising, but at that they will aid even the larger ones. But they are written for the small company, the individual oil man, who thinks of advertising as something that can't be done until he is "bigger."

Advertising, in plain English, is just making yourself and your goods known to your customers and prospective customers in a favorable enough way so they will be more inclined to buy from you.

Advertising is everything from a cheery "Good morning," to 52 double pages in four colors in the Saturday Evening Post. Every one advertises, although every one may not think he does. When you paint your name on your station you are advertising; the same for your trucks. You keep your stations nicely painted or swept and you are advertising. Grow grass and shrubs at your drive in stations and you advertise.

As every oil marketer is advertising already in this way, he should first see if he can't improve that advertising. Make certain that stations, service and bulk, wherever they can be seen by customers, are clean and well painted. Make certain they bear an easily read sign giving name and the name of your gasoline and oil.

Have station employes neatly and cleanly dressed, particularly those who come in contact with customers including the truck drivers. Workmen's coveralls are inexpensive, can have your name worked across the backs, and they can be and should be washed frequently, all at small expense.

Cleanliness begets cleanliness and orderliness, something that American business often forgets. Oil and gasoline are clean products, even tho oil makes a dark smudge. Nevertheless they are clean, they do not communicate disease, they must be used in a clean state. A lubricating oil can, with which a customer's car is serviced, can be kept clean just as easily as it can be kept dirty, and it is better for the can, the oil, the customer AND YOUR BUSINESS. Dirt means laziness. It means a lazy attendant, yes, but it also means A LAZY MANAGEMENT.

Printed Advertising

NOW for what we ordinarily think of as advertising—the printed word.

First a word of caution—printed advertising will not take the place of personal selling, good service, correct products and the right price. Printed advertising is only one of the things which help to get business. But it doesn't take the place of any of the other things, although some men have at times thought so to their sorrow.

Printed advertising can get direct results—that is customers will write in or come in and say "I saw your ad" etc. Those, however, are the least of its results. Printed advertising can only be measured as to its results in a relative and most indefinite fashion, because printed advertising is dealing with that of which we know the least, the human mind. And human minds are all different, yet they are alike. A thousand and one things affect the mind. Some times you know what causes the effect, other times you don't.

The chief thing, in fact the only thing, that printed advertising does is to permit you to put a thought in a customer's mind that you could not do in any other way. You could not send a salesman to call with that thought, at least not at the same small expense. You personally could not even have

called up on the telephone and given that thought. The extent of that thought will depend on what you make it with. If you use a simple post card the thought may be—but not necessarily so—of post card size and it may be overlooked in the rush of the day's business, just as if you had sent a small boy around to yell "Say Mister, John Smith has some good gasoline." If you create that thought with the opposite extreme from a post card, say a beautifully printed pamphlet, with fine paintings, many words and all, the thought in the customers mind will be greater, whether greater in proportion to the added expense is a question.

Any favorable thought is better than no thought at all. Even the shout of the small boy, while not to be compared with the sales talk of a big salesman, may be better than no talk and worth its slight cost.

With the printed form of advertising, you can call more often than you can in person, because you take less of the customer's time; your customer can put aside the card or other literature until he—the customer—has time to read it.

An Indefinite Science

BUT whatever you do with advertising, bear in mind that it is not a definite science and never will be until we know just what makes the wheels go round in our heads and what the wheels are saying when they click by the rachets. Business of every kind has, from the expenditure of billions of dollars, found that the company that advertises with any degree of intelligence is better off than one that doesn't, providing the product and the service are right.

To make use of the printed word in advertising:

FIRST, go to the nearest man who may be accused of knowing something about advertising. He will be your printer, the next man will be the local newspaper publisher. Tell these men that you want to advertise, that you want to spend $25, or $100 or $250 or $500 or whatever it may be in a month or a year. Perhaps neither printer nor publisher would classify as an advertising man, but they can tell the oil marketer something. The printer can get up, with the marketer's aid, a few cards to hand out to customers at pumps, the cards saying, if nothing else, "Thank you—you will find that is good oil and gasoline we have just put into your car—come again." and sign your name.

Even so simple a thing as this has advertising value because it does say "Thank you," something most station attendants neglect to do, and "Thank you's" still please customers. The card says that it is "good oil and gasoline," a pleasing assurance to any purchaser and it invites a return, something most station agents neglect to do. If that little card has done nothing else it has taken some of the chill off a cold business transaction, and with a certain number of customers, maybe only 10 out of a hundred or 50 out of a thousand, it undoubtedly will stick in their minds.

Service Station Material

THERE are all sorts of little things which the local printer and oil marketer can get up to give away at stations and pumps. Even though some of them may be found on the ground a hundred feet away, where they have been tossed by the departing customers, they may have carried the message to the customer's mind, and, if they didn't, they didn't cost much anyway. Distribution of printed material at service stations is one of the most effective ways of giving out advertising. It should be done when the customer drives up. Then he can read it while he is waiting. This same type of material can be distributed to homes having cars in the neighborhood, it also can be mailed to car owners. However make certain that mailing lists are of live customers and prospects, who exist at those addresses today and that the list contains just the names you want. A small list properly worked can be quite effective.

Start small and be guided by the advice of the printer and by experience. It is educational, just like sending a small boy to school. He may not remember who was the third emperor before Julius Caesar, but out of it all he is getting a general impression of the old Roman Empire.

The local newspaper publisher can advise as did the printer. Buy a few inches of space and say, if one can say nothing else, "Good Gasoline at Jones Oil Station"—or "A gasoline station easy to drive into" or any other point or two in one's favor. The shorter the better.

What you want to do is tell as many people as you can, in a way that they will believe you, and in a manner suited to your pocket book, that you have good oil and gasoline. That is the simple aim of all advertising, but some people get excited and neglect to keep it simple. The local small town newspaper may not seem like the best advertising medium in the world, but, the writer can testify, it is one of the best read publications in the world. Its famous column of "personal mentions," may be funny to the city folk, but that column is read by every subscriber. If you don't believe it, get a job on the home town weekly and make a few mistakes as to name, or age or something else in the personal column—as this writer has done in years past—and see how the whole town knows about it. The home town paper is a good advertising medium, the best in fact, for the home town merchant. The pity is that the latter so frequently refuses to recognize that fact. He wants a miracle performed.

The Larger Marketer

THE foregoing is elementary and most oil marketers have progressed beyond it. For them there are printers with service departments, newspapers with men skilled in devising advertising campaigns and advertising agents to act for them. But even these larger marketers, with a few exceptions, do not make the use of advertising they could. Even small space regularly in the newspapers, several times a week, will talk to prospective customers who may never or seldom pass the marketer's stations, or if they pass them, do not happen to think much of the marketer and his gasoline. Advertising, even in small space, can build up respect and confidence which will bring about a purchase of the goods.

A necessary supplement to all advertising and to all marketing are signs, at stations, at pumps and, where possible and desirable, along the road. More states are prohibiting roadside signs. But in the towns and cities signs are needed around a station to identify it and the products it sells. There should not be too many, as is the case with many stations, else the customer will be confused and not see any of them; but there should be enough to tell where the station is located in all directions from which the prospect may approach. The sign manufacturers can give much sound advice.

Accounting System Shows What Each Station Does

(Continued from Page 97)

pany would be necessary Under "liabilities" bonds might replace mortgage notes of the proprietorship and under "capital accounts" the proprietor's drawing account would be eliminated. Another organization might wish to keep a record of other commodities handled than those of the Pierce company but that is a change that any good bookkeeper might make.

Three persons are engaged looking after the system. Mr. Stansfield is in general charge. He makes all general reports, tax reports, financial statements, and such, and also audits the books once each month. One young woman checks the reports and sales records of the wholesale and retail trade. Another does the posting and keeps a tab on the customers' accounts. Each ledger leaf has space in which may be posted the credit limit of any customer and if any exceed that limit or are slow in paying, she notifies Mr. Stansfield and he gets busy as a collector.

The young women also do the stenographic work of the office and clerical tasks such as are common to any office.

How Red Hat Gasoline is Displayed in Philadelphia

Red Hat Gasoline and the advertising emblem of the Independent Oil Men of America, the merchandising division of the National Petroleum Marketers' Assoc., stands out in Philadelphia street advertising through its extensive use by J. Shlifer, head of the Intercity Oil Co. The great part of gasoline sold in Philadelphia is dispensed through curb pumps, drive-in stations being the exception. Through the cooperation of his retail dealers operating selected curb stations over the city, Mr. Shlifer has used the Independent insignia on billboards, wall signs and along with the sidewalk standards showing the Spread Eagle to the end that it has created an impression, even among such a host of billboard and street advertising as is displayed in a city of that size.

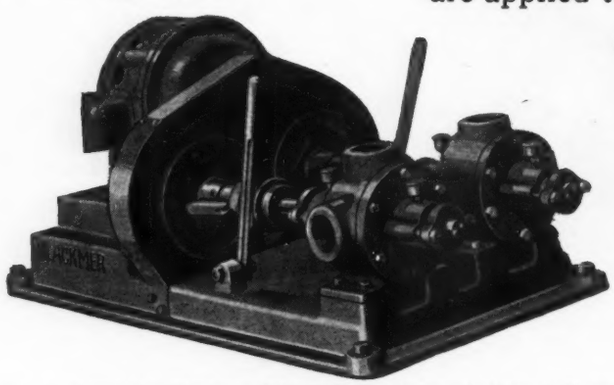
PROVEN—thru 25 Years
Use in the Oil Industry

Blackmer Hand Pumps are used throughout the industry wherever a dependable pump of small capacity is required. Built in several sizes and capacities.

Blackmer has been building pumps — and nothing but pumps—and supplying them to the oil industry for more than 25 years.

During all these years, the Blackmer principle which enables these pumps to compensate for practically all of the internal wear, has remained unchanged.

The lessons that can be learned only by putting a piece of machinery to the tests of actual use under all sorts of conditions over a long period of time, are applied to the pump as it now stands.



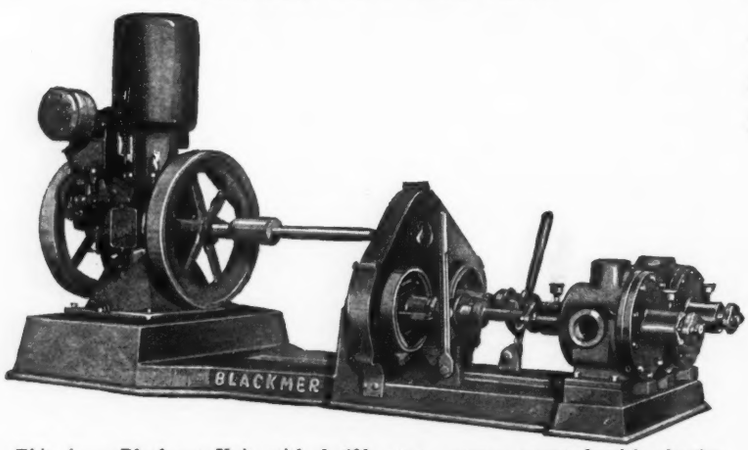
Above is shown the Blackmer NS4 Unit consisting of either 2 50 g.m.p. or 2 100 g.p.m. pumps mounted with clutches on heavy base with suitable motor. These units are built with one, two and up to six pumps on same base with any required power, with or without clutches.

Continuous experiment—sustained effort to forge ahead in the building of a pumping device that will better fill the demands of modern production, has resulted in the Blackmer Rotary Pump of today.

It has created a new standard of pump performance.

It has lowered pumping costs for thousands of oil men.

The Blackmer slogan "More Gallons per Dollar" is fact, not fancy.

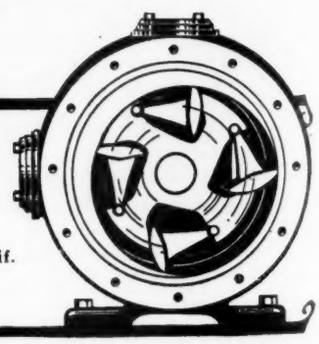


This is a Blackmer Unit with 2 100 g.p.m. pumps mounted with clutches on base with gas engine. Note space for building brick firewall.

Your inquiry will receive close attention.

A new Blackmer Catalog, which contains much information concerning pumps and hydraulics, is now ready.

If you have not received your copy, send for it.



BLACKMER PUMP Co.

Grand Rapids, (Formerly at Petoskey) Michigan

Atlanta, Ga.	Chicago, Ill.	Kansas City, Mo.	New Orleans, La.	St. Louis, Mo.
Baltimore, Md.	Detroit, Mich.	Louisville, Ky.	New York, N. Y.	San Francisco, Calif.
Boston, Mass.	Houston, Texas	Milwaukee, Wis.	Philadelphia, Pa.	London, Ont.
Buffalo, N. Y.	Indianapolis, Ind.	Minneapolis, Minn.	Pittsburgh, Pa.	

I. O. M. A. Is Prominent In Association Advertising

CHICAGO, May 13.—A revised second edition of a booklet containing the results of experiences of associations in national advertising campaigns has been published by the Periodical Publishers' Association, New York. The new edition contains the experiences of 48 associations including the Independent Oil Men of America, and a section dealing with some of the outstanding co-operative marketing associations.

What the Independent Oil Men of America have to say on the subject of its nationally conducted advertising campaign on the spread red eagle emblem and Red Hat gasoline, is summarized in these paragraphs in the periodical:

"Due to the activity of the numerous large distributors of gasoline and lubricating oil and their success in establishing confidence in their products, the Independent Oil Men found themselves at a distinct disadvantage. To offset this they combined and in the latter part of 1925 began a vigorous campaign in their mutual interests.

"By adopting a common emblem for use on stations, pumps, etc.—the Spread Red Eagle—which identifies all their products, they hope to establish themselves on a competitive footing with the larger companies.

"They also have adopted a national trademark brand of gasoline and motor oil which is known as Red Hat.

"Members are assessed by the number of stations at which their products are sold. Dues are payable six months in advance. The program is built over a period of years, but subject to annual renewal.

"Results so far have been very gratifying. Members in all parts of the country are enthusiastic over the campaign and many new memberships have been secured from Independent Oil Men who readily see the advantages of identifying themselves under one national emblem.

"This campaign contemplates a rather wide use of media built chiefly on a magazine background. Local advertising, newspapers, posters, direct mail matter is sent by each member to dealers with material supplied from the Association's head offices."

Pipe Line Manager Resigns

TULSA, May 15.—J. C. Kennedy has resigned from his position as manager of the pipe line department of Shaffer Oil and Refining Co. effective May 31, in order to go into business for himself in oil investments and engineering.

Mr. Kennedy has been associated with the Shaffer company for the past six years and served in the scouting, financial and marketing departments prior to being placed in charge of pipe lines in October, 1924.

$175,000 Loaned to a Refiner Last Month!

In April we entered into leasing arrangements with a Mid-continent refiner. In effect, we loaned him $175,000 in cash. He exercises control identical with ownership. His credit enables a flexibility of supply comparable to a bank loan, with freedom from repairs, taxes, depreciation, interest on the investment and and periodic upkeep expense. The cost is inconsiderable . . . . . Any wonder so many refiners take advantage of North American Leasing Service?

NORTH AMERICAN CAR CORPORATION

Tulsa — 327 So. LaSalle Street Chicago — New Orleans

PRESSURE GUNS REQUIRE HIGH PRESSURE GREASE

Mister Slippery

ADVANCE High Pressure Lubricating Grease is especially made for use in high pressure grease guns. It isn't made like ordinary grease and then thinned out. It is made from start to finish as a gun grease.

High pressure lubricating grease must not melt and run out of the bearings in summer. It must not congeal in winter. It must be easy to force into the bearings and must stay there. Viscosity and body must be right.

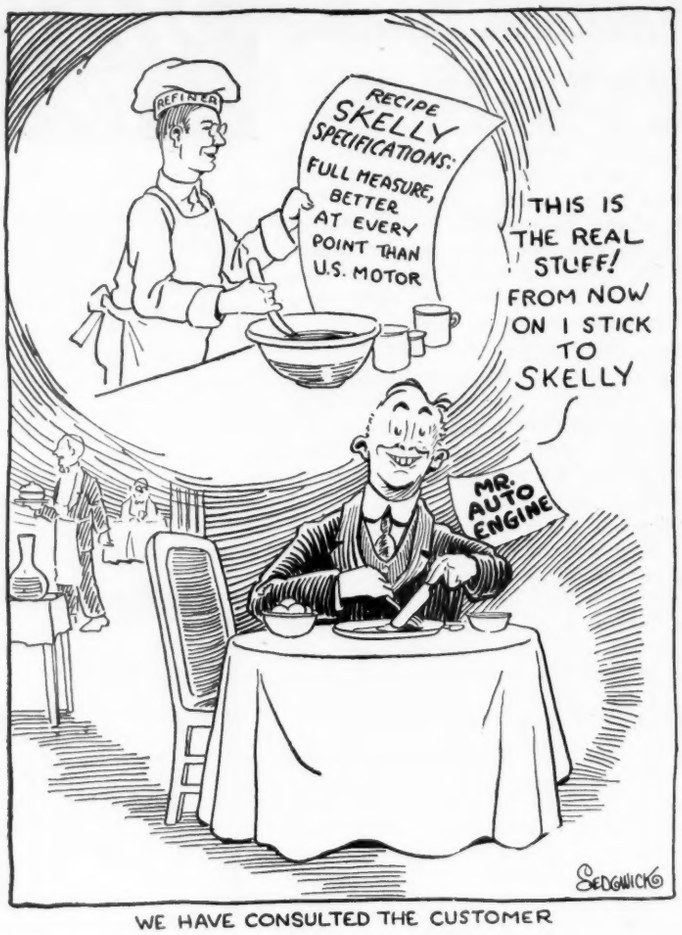
ADVANCE High Pressure Lubricating Grease does its job better than ordinary pressure greases. We don't ask you to take our word for it. Send for FREE samples.

America's Greatest Grease Makers

AMERICAN OIL CORPORATION - - Jackson, Mich.

ADVANCE Gearene

and High Pressure Lubricating Grease


REFINER
RECIPE
SKELLY SPECIFICATIONS:
FULL MEASURE, BETTER AT EVERY POINT THAN U.S. MOTOR
THIS IS THE REAL STUFF! FROM NOW ON I STICK TO SKELLY
MR. AUTO ENGINE
SEDGWICK
WE HAVE CONSULTED THE CUSTOMER

What the Customer *gets*

vs

What the Customer *wants*

FOR six years Skelly Oil Company has been giving the customer a "Better than U. S. Motor" Gasoline. Perhaps giving the customer *what he wants* explains the remarkable growth of this company.

SKELLY OIL COMPANY

EL DORADO, KANSAS

TULSA **MINNEAPOLIS** **OMAHA**

Home Devised Skid and Chute for Barrels Feature of Shaffer Bulk Plant

CHICAGO, May 15

SHAFFER OIL & REFINING CO. recently completed a thoroughly modern lubricating oil plant at East Chicago, Ind., with storage for 184,000 gallons of lubricants. This storage consists of 16 upright tanks each of 11,500 gallons capacity and each carrying a different grade of oil. All the tanks are equipped with steam coils to facilitate operations in severe weather.

Besides the 16 lubricating oil tanks there is storage for 80,000 gallons of gasoline and nearly half that much kerosene. The plant does not have a great deal of light oils to handle as it serves only the immediate community. Three tank trucks and a stake truck take care of deliveries of gasoline and oil in East Chicago. The major portion of the plant's work is to make up carload orders of lubricants and ship them out to the jobbing trade and to the company's own distributing points.

The pump house contains three Blackmer rotary pumps, one single, one double and one triple. The single pump is for 26-30 fuel oil; the double for lubricants, one side for light lubricants and one side for heavy. The triple pump is designed to handle gasoline, kerosene and domestic fuel oil. The boiler room near the office, carries two boilers, one low pressure boiler to keep about 30 pounds of steam on the coils in the tanks. The high pressure boiler for heating the plant and cleaning the drums. The two ballard burners in the furnace room consume 250 gallons of fuel oil a day.

Motor Driven Barrel Hoist

UNLIKE a great many warehouses for barrels and barreled goods, this one is two stories high, and there is no elevator; at least nothing which might in the generally accepted use of the word be called an elevator. At one end of the building is a hoist for barrels, and near the other end is a device by which barrels are lowered again to the ground floor. Neither contrivance works "in reverse."

The barrel hoist is of a standard make in common use where barrels have to be moved from one floor to another. It is a pair of moving chains traveling around two rotating pulleys. The pulleys are driven by an electric motor. On the chains are semi-circular brackets to hold the barrels. An oil drum, either full or empty, may be rolled into a pair of these brackets on the ground floor and lifted to the upper floor and dumped by electric power.

This hoist is installed on the loading platform at the west end of the warehouse. Barrels are within only a few feet of it when they arrive at the plant, whether they come by train or truck, for the platform serves as a loading platform for both stake trucks and boxcars.

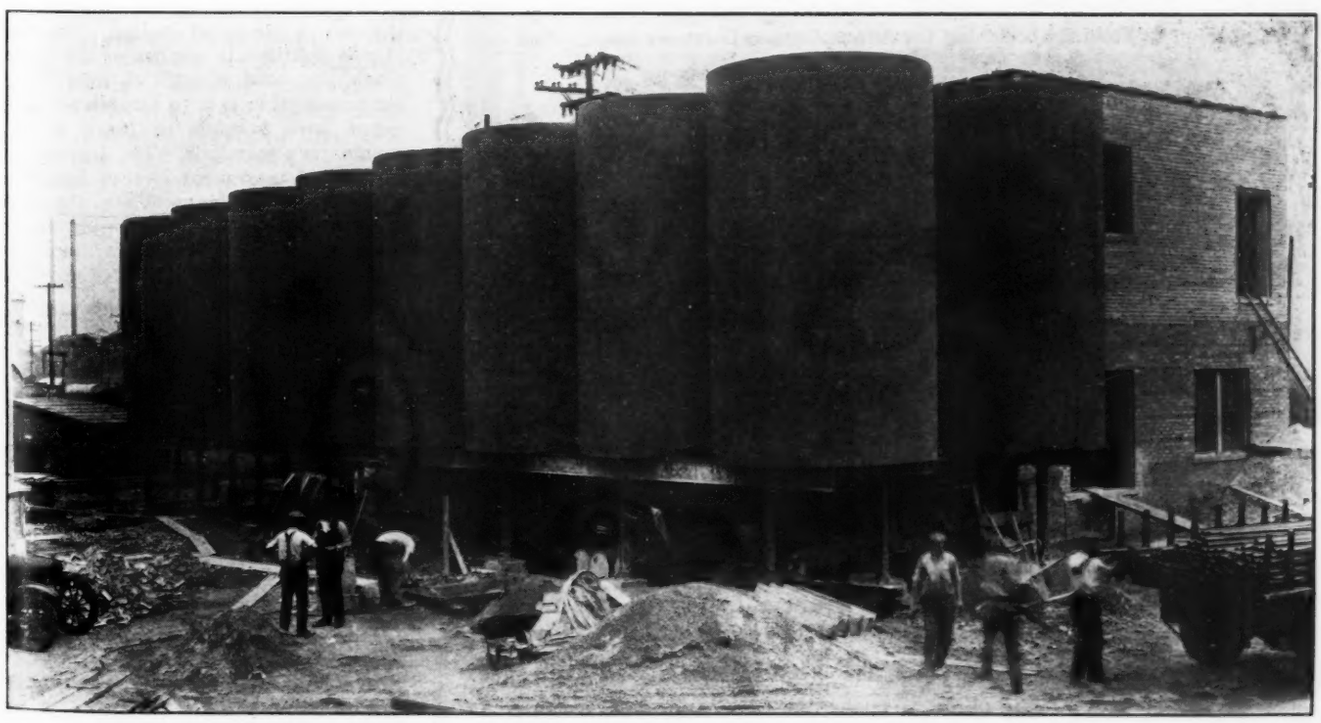
Naturally most of the drums handled are empty, for this plant receives its oil in tank car lots and ships it out in drums, and only the returning barrels have to be taken up stairs at the plant for cleaning and painting. The barrel-filling machinery is on the ground floor.

Cleaning the Barrels

AT the point upstairs where the chain hoist dumps the empty, dirty, incoming drums, their bath begins. First they cross the steam platform for a thorough steaming which removes practically all the oil and foreign substances that may have found their way into them. Then with a caustic soda solution inside of them they are submerged in a caustic soda bath and rotated by machinery. The rotation is a simple process. The drums in the bath rest on two rollers that are revolved on electrically driven shafts.

Clean 100 Barrels a Day

A SMALL overhead crane is employed to lift the barrels from the steam platform to the caustic soda bath and from the bath to the rinsing tank. Three men working at the barrel cleaner can clean 100 barrels a day. Before the installation of this machinery the local Shaffer plant used to have its barrels cleaned by an outside firm that charged $1.50 per barrel. It was found



Sixteen 11,500-gallon tanks mounted on steel base by the Graver Corp. The plant shown under construction only recently was opened by Shaffer Oil & Refining Co., at East Chicago, Ind. The compact warehouse is a model of convenience.

OILCO
PUMP ENAMEL

A Gasoline and Oil Resisting, Water Proof, Weather Proof Enamel.

An Enamel That is Entirely Different

Especially made for gasoline pumps and tank trucks.

Oilco Pump Enamel is gas and oil resisting. 1300 satisfied users.

We know your needs. Let us supply you this year's requirements.

Write for color card and further details.

THE STEWART BROS. PAINT CO.
Manufacturers
Alliance **Ohio**

ALLISON COUPON BOOKS
"None Better Made"

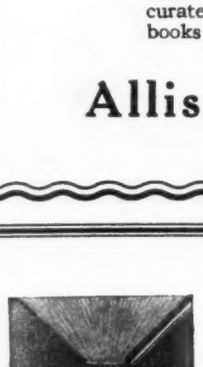
More Than a Slogan—A Standard of Practice

From the beginning the Allison Coupon Company has consistently produced a complete and high grade line of well-designed coupon books, guaranteed to be accurate. Every effort is centered on designing coupon books that will please you thoroughly.

Ask us for Samples

Allison Coupon Company
Indianapolis, Indiana

A Valuable Book!



Cloth $3.25 net
Check with order

Prospecting for Oil and Gas

By L. S. Panyity

Although written by an experienced geologist, it is not too technical, and appeals to the practical man in the field.

National Petroleum News
800 Caxton Bldg. **Cleveland, Ohio**

the cleaning cost per barrel is much reduced at this plant.

After the barrels are cleaned they are tested for flaws. Each drum is charged with 50 pounds of air pressure while a man listens for little "spews" which indicate the location of leaks. If the barrel is silent it is considered serviceable, and consigned to the paint shop. Here it is seated on a small circular platform that is turned slowly with a five horse power motor. While it turns a man paints it with a paint gun.

The combination skid and chute by which these cleaned and newly painted drums are lowered again to the first floor of the warehouse is said to be the only one of its kind in the world. It was invented and built by S. C. Miller, the company's engineer and construction superintendent in Chicago. The cost of the skid is said to have been about $25.

Chutes have long been used in flour mills and cement factories where practically break-proof sacked material needs to be moved from one level to a lower but the chute was only recently employed in the handling of oil barrels. Moreover it occupies very little more space than would be occupied by an electric lift.

Skid for Empty Drums

THE chute starts at an opening in the upper floor. It is not a trough, like most merchandise handling chutes, but is a steel track built of two parallel pipes, far enough apart to fit conveniently outside of the flanges of the standard steel barrel. The track slants downward at an angle of about 45 degrees but comes abruptly to an end about half way down to the main floor.

When the descending barrel leaves this track it is caught in another track of the same gauge which curves around the end of the upper incline. The drum bumps lightly into the arc of the second track, not hard enough to hurt it—not hard enough in fact to scratch the paint—but hard enough to bring it to a momentary standstill. The force of the downward movement is thus broken at the half way point. Then the drum rolls in the reverse direction down to a level platform about table high, and there stops.

The barrels ordinarily stand overnight or even longer before they are used. This wait may be on the upper floor or the lower one, but in the natural course of events a certain amount of moisture will accumulate inside the drum as it cools. This moisture is removed before the drum is used with an ingenious device made on the premises. It is an air pump (a tire pump) with the valve reversed so that it draws in at the point rather than forces out. A 3½-foot copper tube is fastened to the end of the tire pump.

Before the barrel is sent to the filling platform it is examined for moisture. The slender copper tube is inserted through the bung hole, the point immersed in whatever accumulation of wa-

ter may be found in the barrel, and with one stroke of the pump handle the water is sucked out.

The management has also installed a stencil cutting machine in the warehouse. The lettering that designates the contents of the barrel is also stenciled. At the place in the warehouse where the stenciling is done the barrel is only a few feet from the platform where it first landed greasy and dirty. It is now ready to pass out over that same platform to boxcar or truck filled with clean fresh oil.

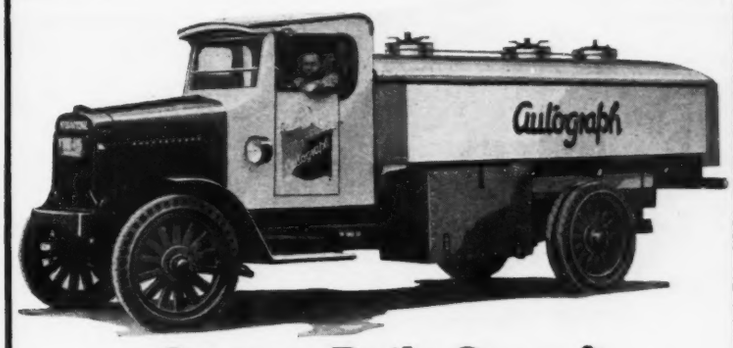
Use Crankcase Drainings For Shingle Paint

SAN FRANCISCO, May 15.—An unusual use for old crank-case oil has been found by the Haight Street Service Station, of which Mr. Sleep and Mr. Walters are proprietors. They collect the oil into pails as it comes from the engine, put it into a barrel and when the barrel is full, notify a painter who hauls it away and uses it for painting shingle roofs. The painter is one who makes a specialty of painting small houses with shingles. This oil has been found to be one of the best materials for a finish on shingles, according to the April issue of "The Record," house organ of the Associated Oil Co. here. The oil gives the shingles the effect of creosoting at lower cost and helps to provide a water tight roof. Being a lubricant and designed to stand great heat it is, therefore, safer for a roof coating than oils of a turpentine base. They sell the oil to painters for 3 cents per gallon.

SHREVEPORT, May 13.—The Crystal Oil & Refining Co. sales personnel was changed to include two new men, effective May 1, Freeman W. Burford, vice president announced today, Dee Thatcher, formerly supervisor of filling station in St. Louis for the Skelly Oil Co. has been appointed superintendent of the retail department, and W. I. Williams Jr., formerly associated with the old Waite Phillips Co. in Tulsa, has been named retail sales manager

HOUSTON, May 13.—John W. Anderson, who maintains an office at 342 West Bldg., Houston, is now representing the Ross-Meehan Foundries of Chattanooga, Tenn., in Gulf Coastal territory. This company manufactures electric steel castings, malleable iron castings, Gray iron castings and Meehanite metal castings. Mr. Anderson formerly represented the Boykin Machinery & Supply Co., and the American Seamless Tube Co., at Houston.

TULSA, May 14.—Leo Ranney, president, and Charles F. Jackson, chief mining engineer, of the Ranney Mining Oil Co., of New York, are in Tulsa for a stay of several weeks in the interest of their company.



Custom Built One of Weldco's Strongest Features

We pay particular attention to the custom built feature of the Weldco Truck Tank. Until motor truck chassis are standardized truck tanks must be built for the individual truck, just as auto bodies are built for the individual chassis. They cannot be made a stock proposition. Each Weldco is designed and built especially for the customer. It is made to suit your exact requirements. If you intend to buy a Reo chassis the Weldco you buy from us will be made to suit the Reo. It will include those particular features which you want. The size and arrangement of compartments, size of fills and outlets, the style of can box and side racks will be just as you order them.

Each tank is so designed that it will exactly fit the truck on which it is intended to be mounted. The load is so distributed that the maximum length of life of the truck and tank is assured. Over-loading and the resultant excess depreciation will be entirely eliminated. In designing the tank much care has been given to the general appearance of the job and the stream line effect is carried out.

Write Today For Our Latest Catalog Which Illustrates The Custom Built Feature.

The Youngstown Welding Co.

Welders Since 1912

Youngstown, Ohio, U. S. A.

DRAINS LIKE A FUNNEL

WELDCO TRUCK TANKS

TRADE MARK REG. U.S. PAT. OFF.

Gasoline And Other Motor Fuels

by Ellis and Meigs, is a book which gives a complete survey of the field and a description of practically every process of prominence.

The price of the book is $10. Just send us your check and we will mail a copy of it to you.

NATIONAL PETROLEUM NEWS

807 Caxton Bldg., Cleveland, Ohio

One of many PRUDEN styles

When Overhead is Low
You make more profit!

A Pruden System service station enables you to do just as much business as you could in any other type of building, though a Pruden building costs only about a third as much as a brick or stucco one would. *You can make a bigger profit in your business because your investment is less.*

Because a Pruden station can be *quickly erected,* you can be doing business in it long before another type of station could be completed.

Because a Pruden station is *portable,* you can reap a big harvest on some very desirable location with one, even though you can only secure a brief lease on the land. You can always move a Pruden station, easily, with 100% salvage, to wherever you want it when advantageous to do so.

Yet Pruden buildings are very substantial, in appearance and in fact. They are fabricated *entirely* of heavy, tough, copper-alloy galvanized steel, which will stand hard service for many years, resisting rust and without depreciation. Pruden buildings come to you *complete;* everything but the foundation.

PRUDEN STATIONS ARE BEAUTIFUL. They are of refined, tasteful design, attractive to customers.

They can be perfectly insulated against heat and cold.

May we not send you our illustrated circular, showing you the wide variety of styles and sizes in which Pruden filling stations and bulk stations are available?

PRUDEN SYSTEM
SAINT PAUL

Metal Shelter Co

Water and So. Wabasha Streets
SAINT PAUL, MINNESOTA

American Operating Methods

are explained in a concise, practical way in OIL FIELD PRACTICE, by Dorsey Hager, petroleum geologist and engineer.

It is written for the business man, the oil field driller and operator, the geologist and the investor.

You may obtain this book containing 310 pages and 98 illustrations by mailing check for $3 to—

National Petroleum News
820 Caxton Building — Cleveland, Ohio

Advertising Hookups by I. O. M. A.

CHICAGO, May 17.—New advertising signs, posters, advertising helps and suggestions are illustrated and described in a booklet recently published by the Independent Oil Men of America, Chicago, for the purpose of urging every member to make use of the spread red eagle emblem and Red Hat gasoline signs of the association, especially now that the spring and summer gasoline rush is almost here.

The booklet, which is entitled "National Hook-Ups," endeavors to point out the benefits to be reaped by hooking up members' service stations with the national advertising campaign being conducted by the association in the "Saturday Evening Post" and the "Country Gentleman," according to Raymond Shaw, advertising director.

Various types of signs and posters for use around service stations and along the road sides are included. Curb signs, plain or illuminated disc signs, illuminated flasher signs and globe signs are described and illustrated with price information also furnished. Suggestions for the painting of displays on bulk storage tanks and truck tanks are given.

Merchandising ideas and suggestions for coupon books, stickers, newspaper advertising, various kinds of equipment, etc., are also included.

Another booklet devoted to expressions as to the importance of cleaning, painting and generally brightening up service stations and other equipment now, is just off the press. It stresses the use of attractive colored paint about stations.

A feature of the book is a table on the kind and grade of metalsteel paint to use on equipment such as on tanks, stations, pumps, trucks, etc. It contains information on how many coats to use, and also how to order the paints and enamels.

TULSA, May 15.—The Tulsa Independent Oil Co. has formally opened a service station at Eleventh and Boston which was recently purchased from the Craig Oil Co. The purchase included a bulk station and another filling station.

The Tulsa Independent Oil Co. was recently organized by O. L. Cordell, formerly vice-president of the Waite Phillips Co. in charge of refining and marketing, R. C. Jopling, formerly division sales manager, and C. M. Bailey, formerly assistant chief clerk, all of the same company.

TULSA, May 14.—J. K. Lytle, for several years manager of the Wewoka branch of the Frick-Reid Supply Co., has been transferred to the Tulsa office. He will be Tulsa city salesman, collaborating in that work with T. E. Haney, who is well known to oil equipment buyers in Tulsa.

These are he Smiths of the Smith Oil & Refining Co., Rockford, Ill. The father, four sons and a grandson. Reading from left to right: C. G. Smith, president; E. E. Smith, secretary, general manager; Guy Smith, first vice president; Carl Smith, treasurer; Omer Smith, second vice president, and Stanley Smith in charge of advertising.

Goes More Than Half Way Paying Claims To Insure Public's Good Will

As Told to Ward K. Halbert N. P. N. Staff Writer

By E. E. Smith, General Manager, Smith Oil & Refining Co.

ROCKFORD, ILL.

"KEEPING everybody happy" is the business policy of the Smith Oil & Refining Co., which has operated here for 16 years and is now recognized as one of the leading Independent oil jobbing firms in this section. In the matter of dealing with its customers, its employes, its competitors and the public in general, the company's policy might aptly be summed up in the three words, "keeping everybody happy."

Most any merchant realizes the importance of keeping on friendly terms with regular customers. The wish of a man who controls a big account is quite a powerful factor in the conduct of any business towards that account. The treatment of stragglers, strangers, itinerants and persons who are not actually buying is often careless if not blunt; but not so in the Smith organization. When a pedestrian walks into one of Smith Oil & Refining Co's. service station, he gets as cordial a "Good Morning, Sir" as if he were driving a Hudson car with 20 gallons of vacant gasoline tank.

"Every time you annoy a motorist on the road you annoy a customer, actual or potential. We keep that fact deeply impressed on the minds of our truck drivers," said E. E. Smith, secretary and general manager of the company. "We have meetings of our organization monthly, and we never miss a chance to emphasize the responsibility of any company representative in dealing with strangers. And we have found that it pays.

"Suppose one of our big trucks is out on the highway in a narrow place. The motorist behind who wants to pass sounds his horn. Even though it causes him inconvenience, our truck driver makes way at once for the faster vehicle to pass. The man on the truck may not know the man. He may have no way of ever knowing who the motorist was. But the man in the pleasure car knows the truck. It is painted our own bright yellow. It has black letters on the side that read, 'Smith Oil & Refining Co.' and the motorist will not forget. He may take it as a matter of course if he gets by quickly, but if the driver seems to delay him unnecessarily, he will resent it.

Adverse Notoriety Bad

"WHILE word-of-mouth advertising may be the best advertising in the world, on the other hand, a knocker is the most damaging of all bad publicity. We spend thousands of dollars on salesmen to go about recommending our products. We spend thousands of dollars advertising our goods in the newspapers and on posters. So we can not afford to let any outsider go around knocking our company, either its goods or its policies.

"We pay claims brought against us, even though we know they are unjust claims, when we are sure the party really thinks he is right in asking for an adjustment. When we treat an injured customer well, make him think we are fair and more than fair, he is bound to be a booster for us. If we can convert a man's ill feeling into satisfaction, he is no longer a passive spectator of our business, he might have been a knocker but he becomes a walking advertisement.

"It does not matter whether a claim is just or not. If the man thinks his claim is just, it is all the same to him. And if he thinks it strongly enough he can make disinterested persons agree with him. Our plan is to try to keep everybody satisfied."

A Few Examples

"A FEW weeks back a little school teacher, popular locally and of unimpeachable truthfulness, drove her brand-new Ford roadster into one of our stations, and filled it with gasoline and oil. It was Friday afternoon and business was rushing. She was on her way up into Wisconsin for the week-end. When she arrived in Beloit her bearings were burned out. A service station attendant there told her there was no oil in her motor at all. She had to have her car towed to a repair shop.

"Now that little car represented quite an investment for the school mistress and she was all cut up over it. Not a man at our station could remember attending to her wants when she bought gasoline and oil. As far as our records showed, she might have gotten the oil somewhere else. She could not explain the loss of the oil, nor could we. But she was honest, and she blamed us. The bill was $90 and we paid it, gladly. It was a good investment, not to allow that

woman and her friends to think she had suffered from our carelessness.

"Here was another case. Not long ago a farmer (a renter) making a crop about 20 miles up the road halted at one of our down-town stations about dark for gasoline. His wife was probably waiting supper on him, for he appeared to be in a hurry and to have come quite a way. In the back seat of his dilapidated little touring car were three children and $18.50 worth of groceries. The man didn't have $2 in his pocket, it later developed. Thank Heaven the children climbed out of the car, for it caught fire at the first stroke of the gasoline pump. Top and trimmings were burned off the machine and the groceries were a total loss.

"Here is what we did. We sent a messenger down town and duplicated the groceries. We called a cab and sent the man and his children home. And we had his car repaired and turned over to him, and none of it cost him a cent. If this matter had gone to court he could perhaps have fastened the responsibility on us, for the fire broke out in our station on his machine, but we don't let people force us to a settlement. We settle promptly, when it gives the injured party the greatest satisfaction and does us the most good."

The Smith Oil & Refining Co. mailed a letter early this spring to each of its customers who bought domestic fuel oil during the winter, just at the time the grass began to appear on Rockford lawns and buds on shrubs began to open.

The letter was accompanied by a printed postcard, ready stamped and addressed to the company, on the back of which was a small printed square wherein the customer was to mark an "X" if his lawn had been damaged by the oil trucks during the winter. There were blank lines where the customer might write his criticism of other things if he had any. The letter read:

"In spite of our taking every known precaution to insure your lawn and property against any damage by our trucks, our men are all human and perhaps have made mistakes that have injured your lawn or shrubbery.

"We have available, as in past years, a capable landscape gardener who will be glad to call, free of charge, and repair any damage done by our men or trucks. The enclosed card will bring him immediately.

"We hope you will indicate on the card any part of our service system which has not pleased you. Only through your co-operation can we maintain the leadership in the fuel oil business which we have enjoyed in past years.

"It has been a pleasure to serve you during the past season and we trust that our policy of delivering only uniform high quality oils of maximum heat units will justify your placing your business with us for next Fall and Winter."

Wherever there were "sore spots" in the trade, (customers who were harboring ill feeling about which the company authorities knew nothing) the letter discovered the sore spots. They were not very numerous. Mr. Smith was happy over the few complaints in comparison with the large number of cards returned. But wherever there was any indication of bad feeling toward the company, immediate action was started toward making adjustments. The idea was to satisfy the customer, make him a friend and a booster and keep his patronage.

A great many of the company's customers wrote fine friendly messages on those cards in the space reserved for complaints, and returned them to the company. In the meantime the landscape gardener is out, patching up cut lawns and black spots and dead grass with new sod, wherever a customer marked a cross on the card.

Keep Employes Happy

ALONG in the afternoon a big, handsome tank truck halted in front of Smith Oil & Refining Co's. loading rack and a strong middle-aged man climbed off. "Hello Earn," he said addressing the secretary and general manager.

"This is our oldest tank wagon driver," Mr. Smith said, in introducing him. "Yes" answered the driver, "I was taken over along with the horses when the Smiths bought the little plant that was on this ground, 15 years ago. We have been getting along pretty well ever since."

From other members of the Smith organization it was learned that every employe of the company has a half-day off every week. Every employe gets a week's vacation on pay every year, and any of them can have two weeks vacation that ask for it. And for five consecutive years now, every employe has received an annual wage bonus of 10 per cent of his wages.

The custom of giving a half-day off a week does not apply to service station men—they have an even better arrangement. Filling station attendants work from 6:30 a.m. to 10 p.m. every other day. That is the equivalent of 54 hours and 15 minutes a week, or 1 hour and 45 minutes less per week than if they worked eight hours every day. This plan is especially pleasing to the men themselves and works a big advantage for the company.

Why Men Like It

WORKING in this fashion the heavy days and the light days are equally divided. Every service station man works one Sunday in two weeks. Although the company officials frown upon a man's working two 15½-hour days in succession, they permit it in rare instances. So it is not uncommon for two of Smith's employees to swap a day's work. In this way a station man can have two days off together at almost any time it can be arranged.

So desirable are these hours that tank truck drivers are all anxious to work at service stations. There are exceptions of course, but most of the new drivers are candidates to get on as service station attendants. The shift from wagon to station is otherwise considered a promotion too, because Smith Oil & Refining Co. recruits its sales force from its service station crew as far as possible. So a driver is one step nearer a salesman when he leaves his truck and takes a service station job, even though it does not bring him any more pay.

As it is now in the organization, all the service station men can drive a truck and more than half of them have actually driven a Smith Oil & Refining truck. While doing so they learned the merits of the company's merchandise and secured the experience at meeting the public that is considered an essential part of every young salesman's education.

Company's Advantage

FROM the viewpoint of the auditing department, it is good to have every station man start and complete a day's business himself, without changing in the middle of a day's sales. There are 30 service station men who operate the company's 12 stations. Of these, 15 are off every day. Many of these men appreciate an opportunity to do work on the side to earn extra money and learn more about the business. Some of them go out and collect or solicit. Others take a hand as an extra man in the office. Any of them can relieve a truck driver who happens to be sick. In the winter when the domestic fuel oil rush is on, a few of the station men take all the trucks out and operate a short shift after the regular men are off.

Some of the truck drivers do not care to be service station men and do not look upon a transfer as a promotion. These men remain on trucks, so long as they are satisfactory. On the other hand the management might not transfer a man even if he was ready for it and desired the change, if in their opinion he was best suited to drive. The company has not often found it necessary to exercise an arbitrary refusal of this sort, for there are promotions for deserving truck drivers that do not involve a change of occupation.

Driving a country tank wagon route, for instance, is considered a more difficult job than driving in town. One third of Smith Oil & Refining Co.'s tank trucks are on rural routes. Drivers of these trucks have to be salesmen. City drivers are more specialists in delivery, taking big loads to big dumps, striving to make speed and move as much gal-

lonage in a day as possible. But country drivers are the company's only representatives on their routes. New business from out where they go is entirely up to them.

Commissions on Sales

COUNTRY drivers have an opportunity to earn extra money. They have to know their line and be able to talk its merits to the farmers along their routes. A certain volume of business (an arbitrary figure agreed upon) is considered inherent in each country route, but drivers get commissions on all new business, and on all the sales of lubricating oil they make in a month above the given amount.

There is no set difference in pay between a country driver and one working in town, but any driver can make more money in the country than in town if he tries to sell goods. Some of the drivers draw additional pay for long periods of service with the company, so drivers' pay is not uniform. But with certain very well understood exceptions, the drivers in the country draw as much money as the men in town, plus their commissions.

The matter of credit is another point upon which the man in the country has more responsibility than the city driver. Rural tank truck drivers may extend credit at their own discretion, with the provision of course that they do not allow anybody to postpone payment beyond the second fill. Moreover, the company does not hold the driver responsible for credit thus extended. Their mistakes are the company's loss, but mistakes are not often made.

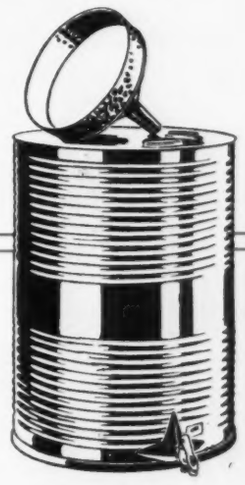
"Our drivers are better judges of rural credits than our credit department could be," said the superintendent of truck operations, recently. "Only today one of the fellows came in and said he had refused a new account on his route. I asked him why and he said, 'I looked around the place and it looked like a bad risk. A farmer that will leave his tools lying out in the weather is poor man to sell on tick,'and I don't question his judgment a bit.

Regarding Competition

"Our attitude toward our competition is a simple one," said Mr. E. E. Smith, the general manager. "We never mention them to people outside of the trade. We are on friendly terms with all of them. They visit with us here and we spend our time and money to keep out price wars and promote friendly feelings. In justice to them we have instructed our advertising department and advertising agency never to refer to a competitor. We try to make our advertisements leave the impression that we don't know we have any competition. We even abstain from the use of superlatives in our 'ad' copy. We never call our products the 'best in town.' We say our products are good and let the other fellow testify about his own. We don't know how it compares with ours."

Merchandising Equipment

That Helps You Sell at a Profit



REIS Standard Faucet Tank

Too often the cost of providing dispensing equipment wipes out the margin of profit in selling gas, oil and kerosene. Yet it is necessary to use this merchandising equipment to get business.

REIS standard pump and faucet tanks are sold at a price to make merchandising profitable. Their sturdy quality is comparable to the best.

REIS equipment will help you establish dealer and farmer trade. Some of the largest companies in the country are finding REIS equipment invaluable for distributing to tank wagon trade.

Tanks are attractively finished with your name stenciled on each tank in lots of a dozen or more. Send in the coupon for descriptive illustrated folder on REIS products.

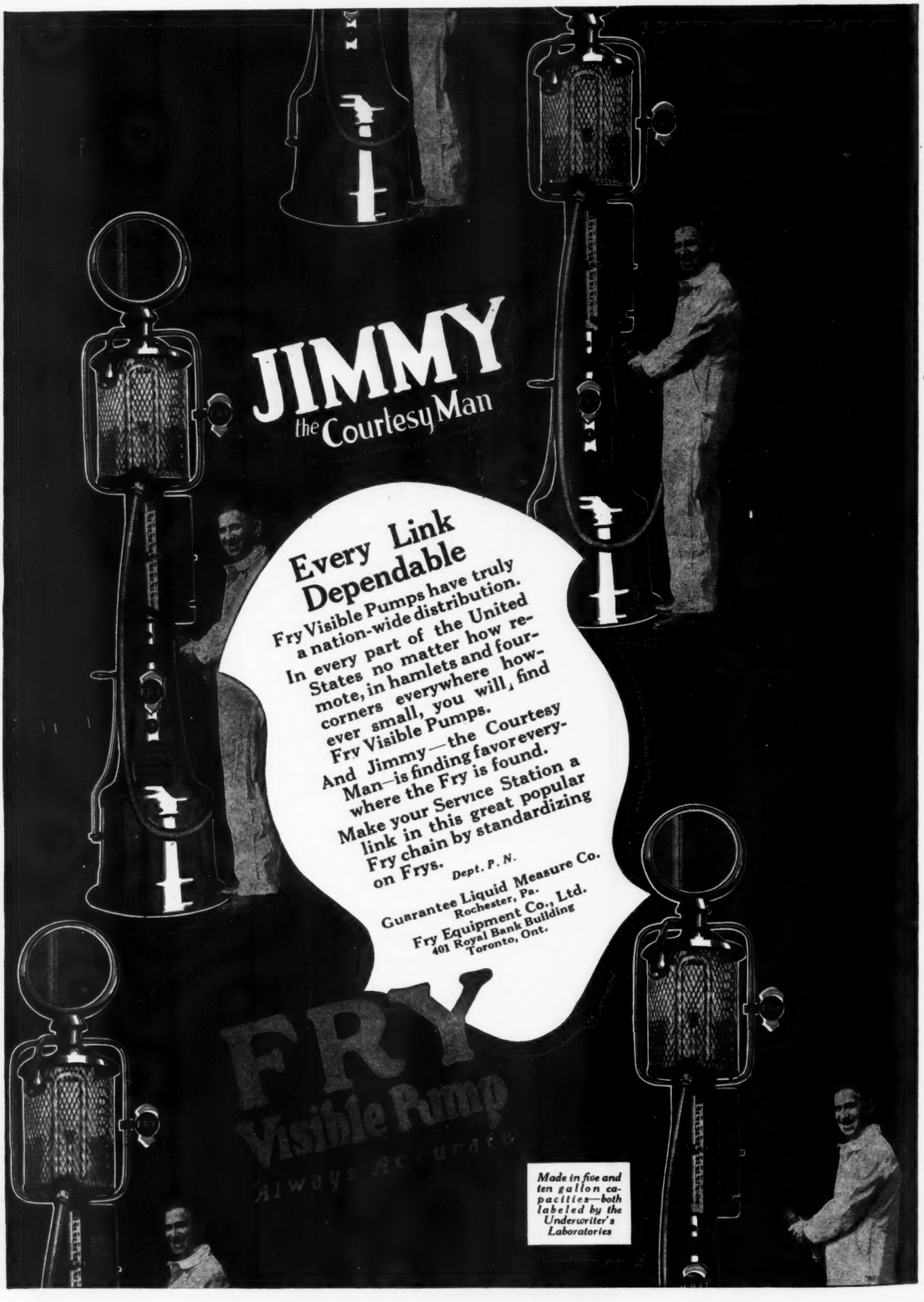
The Theo. Reis Co., Cincinnati, Ohio

ESTABLISHED 1887 INCORPATED 1923

Makers of:
Pump Tanks
Faucet Tanks
Measures
Funnels
Tank Wagon Buckets

THE THEO. REIS CO.
2011 Central Ave., Cincinnati, Ohio
Gentlemen: Please send me complete information on REIS Products.

Name .....
Address .....
City .....
State .....


JIMMY
the Courtesy Man
Every Link Dependable
Fry Visible Pumps have truly a nation-wide distribution. In every part of the United States no matter how remote, in hamlets and four-corners everywhere however small, you will find Fry Visible Pumps.
And Jimmy—the Courtesy Man—is finding favor everywhere the Fry is found.
Make your Service Station a link in this great popular Fry chain by standardizing on Frys.
Dept. P. N.
Guarantee Liquid Measure Co.
Rochester, Pa.
Fry Equipment Co., Ltd.
401 Royal Bank Building
Toronto, Ont.
FRY
Visible Pump
Always Accurate
Made in five and ten gallon capacities—both labeled by the Underwriter's Laboratories

Gives Helps on Air Compressor Installation; Lubrication and Maintenance

By G. W. Gille
Chief Engineer, United States Air Compressor Co., Cleveland

FREE air service has become an important part of filling station work. There is nothing more nerve racking to the attendant or owner of service stations than to have a customer drive into his station, and be unable to furnish him an adequate supply of air for tire inflation purposes. Developments in the industry also are placing more emphasis upon the efficiency of the air service due to other requirements, such as furnishing air for spraying springs with penetrating oil, cleaning motors, operating air gasoline pumps, and in some cases the operation of air lift grease racks. The almost universal use of balloon tires, with their vastly increased requirements for volume air in place of high pressure air, also demand consideration when the type and size of air compressor is to be decided upon.

Many operators and filling station attendants lack understanding as to the correct care and maintenance of an automatic air compressor, and this article is written with a view of correcting many "so-called" air compressor troubles and familiarizing the new operator with the correct type and size of compressors to install at new filling stations in order to furnish an adequate supply of air for all purposes.

Air Requirements

IN the past filling stations furnished compressed air to the driving public for tire inflation only, but, with modern demands it behooves the purchaser of an air compressor to first analyze carefully what he proposes to use his compressor for and then to purchase a compressor of ample capacity. There is nothing more aggravating and unprofitable than to attempt to accomplish certain results with a compressor that is too small. Be sure to advise the compressor manufacturer exactly what you expect to use air for, so the proper size and type of compressor can be recommended.

Operators of large drive-in stations, where air is used for operating gasoline pumps, in addition to air service towers, spray racks, and so on, should seriously consider installing two compressor units, connected in series, with an additional air receiver, so in case of accident to one, the other is still available for the gasoline pumps.

Spring oiling and motor cleaning at filling stations may seem outside the realm of their proposed service, but such service is becoming more and more expected by the motoring public and the wise operator will make his plans accordingly.

Location of Compressor

MOST good compressors operate quietly so it is not necessary to install them in basements to avoid a noise on the first floor. In designing a station, or when deciding on a location for an air compressor unit, it should be remembered that an air compressor, like any piece of machinery, requires a certain amount of care and attention. With this in mind it should be located where all parts of the unit are accessible and where it will always be under the station attendant's observation.

The basement is not the proper place for an air compressor because this is usually damp and unventilated. Placed here a compressor does not get the clean, fresh air it requires and it will probably not get the necessary attention. A small room on the first floor of the station is most desirable, but plenty of ventilation should be provided to furnish ample clean air. This room can be constructed of any partition material. Tanks in a basement will precipitate, or "sweat," more than on the first floor, also.

Installation

WHEN the compressor is received, the station attendant should be instructed to save all instruction cards or booklets and to leave all tags on the unit. Instructions should be preserved and placed close to the unit where they can be referred to. **This is important.** See that the compressor is set on a good firm foundation or level floor and securely bolted. Next, see that the motor on the unit is wired properly and is of the proper characteristics for the current available. There is a name plate on the motor which gives this information.

Always connect direct to the meter with a No. 10 wire. If the motor is single phase, it is usually of the double voltage type, i.e., it can be operated on either 110 or 220 volts by simply changing the connections at the motor. The booklet sent with the motor will show this in detail. It is always advisable to connect to a 220-volt line, if available, as this is usually the power circuit and is not subject to voltage fluctuations as is the case on a 110 volt line, which is usually the lighting circuit. A great percentage of troubles are caused by insufficient or fluctuating voltage of a badly overloaded electric circuit, and it is important to see that the voltage for which the motor is wired is available at the motor terminals.

If the motor refuses to start, if the brushes continue to fly in and out, or if the motor does not produce the stated revolutions, have the local power company attach a volt meter at the motor terminals, to determine the voltage when motor starts. If voltage is low or fluctuating, the power company will no doubt take steps immediately to eliminate the cause or at least to offer suggestions. It is common practice with most power companies to insist on the 220 volt line for any motor over one-half horsepower.

Every compressor unit is designed to rotate in a certain direction to get the desired results from different compressor refinements such as spring take-up, motor bases and idlers used to give proper belt tension, increased belt contact and take up the stretch that always occurs in leather belts. It is therefore important to see the unit rotates in the direction intended by the manufacturer. The instructions accompanying the unit specify this and some manufacturers cast arrows on the compressor pulleys showing the direction of rotation.

Belts

The endless leather belt sent with the unit will give best results when travelling in a certain direction, governed by the laps or joints. The operator should see that the belt is put on the unit so that the arrows usually stamped on it point in the direction of rotation. Belts should always be put on with smooth or hair side next to the pulleys.

Care of Compressors

USE a light grade of motor oil in the bearings of the electric motor. Fill through covers provided on the top of bearings until oil flows out of the overflow hole on top of oil cups. If there is a belt idler on the unit, follow the instructions and fill oil or grease cups at regular intervals.

Most compressors are lubricated by the well-known splash system and all that is necessary for proper lubrication is to fill the crankcase, when the compressor is not operating, with a good grade of gas engine oil to top of oil cup or to level indicated on oil gauge. A great percentage of troubles experienced by operators is due to either over-oiling or insufficient oil. Too much oil is just as detrimental to satisfactory operation of the compressor as not enough. Manufacturers usually provide some

simple means of designating the proper oil level and operators of stations should impress on attendants the fact that oil must be carried to the level indicated and that too much oil is detrimental, to counteract the popular belief that, if a little oil is needed, an abundance means a large margin of safety. Instructions on lubrication should be read carefully. The average compressor consumes a very small amount of oil, and just enough should be added occasionally to maintain oil level in crankcase.

After the compressor has been in operation a week it should be drained of all oil and filled with fresh. This should be done every two or three weeks until the unit has been in operation two or three months, after that every month or two should be sufficient. This is just as important as changing oil in the crankcase of an automobile. Use a light grade of oil in cold weather and a medium grade in warm.

The compressor should now be ready to start. Throw the switch in and out quickly to be sure the compressor starts freely, then turn on the current for the required period of operation.

General Service Information

Leaks. The drainage valve on the bottom of the air receiver should be opened at least once every 30 days to drain condensation. If this is not done condensation will be carried over into the air line. If, after the compressor has been in operation for some time, it suddenly refuses to pump, or if it takes much longer than usual to pump up the air receiver, the trouble may be due to a number of things. First, check air lines, and especially hose in service towers, with soap water to see that these have not developed leaks. Second, close all valves so that the compressor is pumping into receiver only and, if the condition still exists, the trouble is undoubtedly due to faulty valve action in the compressor. Small particles of dirt or foreign matter, if drawn into the compressor, lodge between valve and seat, and materially reduce the efficiency of the compressor. Valves on most compressors can easily be removed without breaking pipe connections. Clean carefully and be sure to put back just as they were taken out.

A leather belt will give better service if dressed occasionally. Use neatsfoot oil or some good liquid belt dressing and apply sparingly. Do not use stick dressing.

Clean the commutator or electric motor occasionally with a fine grade of sandpaper by pressing firmly against the commutator while motor is running. This can be done as the commutator is not charged. Do not use emery cloth or explosive liquids such as gasoline.

Most operators do not realize that even the smallest leak in the line will greatly reduce the efficiency of the compressor, especially at the high pressures used today. The following table will give some idea of the amount of air that will flow through round orifices of given diameters at the pressures shown.

Do not sweep out filling station while compressor is in operation as the dust and dirt will be drawn into the unit.

Attendants should not readjust automatic pressure controller to obtain increased pressure, as this is set by the manufacturer after due consideration for the efficiency of the unit.

This brief discussion of the function, care and maintenance of air compressors is advanced with a view of familiarizing to a greater degree, the individuals who are responsible for continuous air service and it must be remembered that even though air compressors are completely automatic, they still require some care and attention. When these instructions are followed, an air compressor should give long, continuous service at a minimum of cost to the operator.

Figures Show Cubic Feet of Free Air Per Minute That May Escape from Leaks in Air Compressor Line

Diameter of Orifice	GAUGE PRESSURE													
	2	10	20	30	40	50	60	70	80	90	100	125	150	200
1/64	.038	.084	.119	.156	.190	.225	.260	.295	.330	.364	.400	.486	.570	.760
1/32	.153	.342	.485	.632	.770	.914	1.05	1.19	1.33	1.47	1.61	1.97	2.33	3.07
1/16	.342	.770	1.07	1.40	1.71	2.05	2.35	2.68	2.97	3.28	3.66	4.12	5.20	6.90
3/32	.647	1.36	1.93	2.52	3.07	3.64	4.20	4.76	5.32	5.87	6.45	7.85	9.20	22.2
1/8	1.37	3.06	4.28	5.60	6.84	8.20	9.40	10.7	11.9	13.1	14.5	17.5	20.8	27.5
5/32	2.43	5.45	7.70	10.0	12.3	14.5	16.8	19.0	21.2	23.5	25.8	31.4	36.7	48.7
3/16	5.45	12.3	17.1	22.4	27.4	32.3	37.5	42.9	47.5	52.4	58.0	70.0	83.2	110
1/4	9.74	21.8	30.8	40.0	49.1	58.2	67.0	76.0	85.0	94.0	103	125	147	195

Dayton Pump Salesmen Must Study Repair

How the Dayton Pump & Mfg. Co. trains its salesmen so they can service a pump as well as sell one, is described by L. L. Roddy, advertising manager, in an article in the April 15 issue of "Printer's Ink."

It is not possible for a salesman to make a success of selling gasoline pumps unless he knows thoroughly how the pump is made, and the factors which may render its proper operation impossible, it is stated in the article.

In the past year or two, the company has followed the policy of selecting young men, preferably those just out of college, for salesmen. These men, when they are hired, are put through a shop training course of several months. They work in each department from the raw castings to the shipping floor, and learn how to actually build pumps. They find out where each part goes and its function. They wear overalls, work shop hours, and get no fancy pay.

When they have finished with the pump building course, they are sent into the factory service department where they work with expert repair men. Pumps needing major repairs are brought in and put into first-class condition. When the manager of this service department gives the young men his O.K. and pronounces them ready for selling, then they go out to receive assignments in the selling branch.

The Dayton company believes that, with this background of practical experience, the men will not be afraid of soiling their hands or clothing nor lack the mechanical knowledge necessary to fix a pump whenever any part of it may be out of order. He will be able to fix the pump right on the ground without waiting for special information from the home office.

The gasoline pump salesman can do much toward building good-will by giving advice and instruction by demonstration, the company states. With the smaller customers he must be ready personally to make matters right because there is no one else to do it.

MIAMI, OKLA.—The Continental Oil Co. has purchased the business of The Ottawa County Oil Co. here, consisting of bulk station, delivery equipment, and other equipment. O. H. Widick, manager of the Ottawa County company, continues in that capacity with the Continental company.

Walter Willard Returns To A. O. M. A. Office

CHICAGO, May 15,—Walter G. Willard is back with the American Oil Men's Association as assistant secretary after an absence of two years from Chicago and from any association with the oil industry. Meanwhile Mr. Willard spent several months with his people in Boston, sailed before the mast for a while, spent some time in England and had just returned from Porto Rico when he was requested to return to Chicago and assist H. G. James.

Mr. James' health has not been the best for some months. After an extensive journey in the interest of peace in the marketing branch of the industry last fall, a tour which Mr. James refers to as his "barn storming trip," he never has been able to recover his strength. The directors of the A.O.M.A. are co-operating with Mr. James' physician to keep him from overworking until his strength returns. Just now Mr. James is at his home in Kansas City, playing golf a great deal, and his doctor says he may be himself again before autumn. In the mean time Mr. Willard is in charge of the Chicago office.

Mr. Willard still advocates the same principles of organization that he fostered when he was identified with the A.O.M. A. before he believes in strong state units to solve local problems, state support for national organizations to handle matters more general in character, and ethical merchandising methods. With reference to merchandising plans, Mr. Willard said, "Business is sensitive; it goes where it is invited and stays where it is well treated."

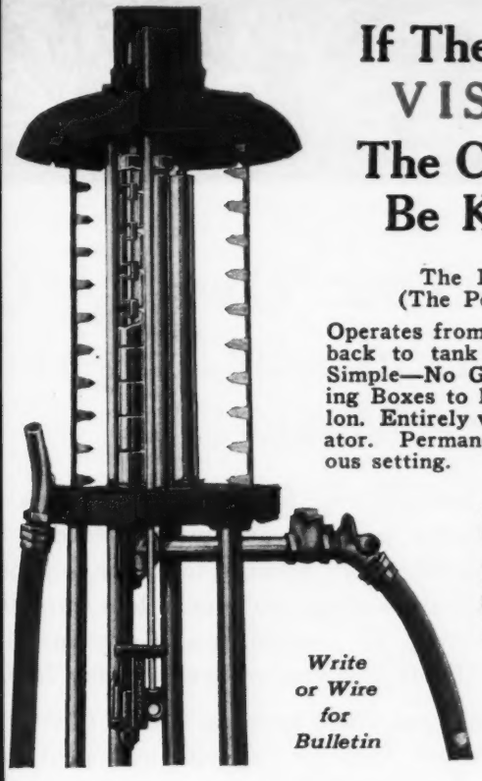
C. A. Boler New President of Tiona Petroleum

DAYTON, O., May 17.—The directors of the Tiona Petroleum Co. on May 7 elected as president to succeed the late H. E. Worthington, C. A. Boler. Mr. Boler was also elected a director of the company.

Mr. Boler became connected with the Union Petroleum Co. in 1905, remaining with that organization until 1923. At the time of his resignation he was in charge of their export business.

He then became associated with the Tiona Petroleum Co. shortly after its first year of business and was in charge of its foreign business. In the early part of 1925 he was elected vice-president and just before his election as president made an extended trip throughout Europe. Mr. Boler takes office immediately.

In the readjustment of the organization, due to the death of Mr. Worthington, there have been no changes in the other officials. Vice-presidents are H. A. Logan, E. M. Lyons; treasurer, W. A. Powell; secretary, S. P. Worthington.



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There are two kinds of markets in any territory—quality markets and price markets. The price market never belongs to anyone—it is unstable, shifting—always subject to loss through the price cutting of competitors. Certainly you can't BUILD anything on such a shaky foundation!

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USE
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OILS

Boiler Standards Agreed on, Except Pressures and Dome Location

Staff Special,
HOUSTON, May 14.

DIVISION of opinion regarding working pressures and the location of the dome on oil field boilers constitute about the only questions remaining to be settled by the American Petroleum Institute committee working on this phase of standardization.

A. B. Steen of The Texas Co., Houston, national chairman of the committee, has sent out copies of the specifications approved at Los Angeles, which, he says, are a compromise in certain respects. The California committee submitted recommendations which before being acted upon it was felt should be submitted to the other districts.

Mr. Steen's letter points out the division of opinion as to where the dome should be located, as follows:

California district — Strongly favors location over the barrel.

Louisiana and Arkansas districts—Favor location over the barrel.

Mid-Continent district—Majority in favor of location over the barrel, but prefer larger size than permitted in the A. S. M. E. code.

Texas district—Prefers location over the firebox.

Rocky Mountain district—Majority of committee favor location over the firebox.

Eastern district—Only small size used, but prefer dome over firebox; believe on sizes larger than 50 horse power the chance for bracing is better over the shell.

Manufacturers' sub-committee—Several manufacturers advise that there is considerable demand from customers for dome over barrel, but recommend that location of the dome be left optional with the purchaser.

Dome Location Optional

UNDER the circumstances, says Mr. Steen, it was agreed in the boiler specifications that the location of the dome should be left optional with the purchaser.

"It is our opinion, however," he continues, "considering that these boilers are all used for the same purpose, that we should come to an agreement on this point.

"The tendency seems to be in favor of the location over the barrel and probably as the various districts standardize locally on this point the various other districts will eventually get in line.

"From the standpoint of simplification in manufacture and interchangeability between districts, especially in the case of the larger operators who operate in more than one district, it seems to us that this question should be eventually settled, specifying one specific location for the dome."

Working Pressures Debated

THE California district was in favor of specifying 150 horse power working pressure on the 65 h. p. and 85 h. p. boilers, in addition to the 175 pounds working pressure already agreed upon, so, Mr. Steen says, it was necessary to make two classes to take care of this situation.

"However," he continues, "this places an additional burden on the manufacturers, compelling them to make two boilers of the same horsepower with different working pressure to take care of the various districts.

"It is hoped in the interest of simplification, that eventually one working pressure for each size of boiler can be adopted by all districts."

A copy of the report made at the Los Angeles meeting by the California district sub-committee shows some of the questions raised by its members:

Solid Mud Rim

"AS we view it, the question of the solid mud rim affects the size of the grate area, which determines the stay-bolt requirements under the A. S. M. E. code. The special sub-committee to confer with the A. S. M. E. boiler committee will take this question up with them in the near future.

Opening For Water Columns

The recommendation of one inch opening for water columns refers to return tubular boilers only, and we

Table No. 2—A. P. I. Standard Boilers Locomotive or Firebox Type

ITEM	30 H. P.	50 H. P.	65 H. P.	85 H. P.	REMARKS
Size of Boiler, horsepower					
Size main steam connections	3"	3"	3"	3"	(All openings to be stand. thread)
Size of Boiler Feed connections	1½"x1¼"	1½"x1¼"	1½"x1¼"	2"x1½"	(Brass Bushings All Stand. Thread)
No. Boiler Feed connections	2	2	2	2	(To be located one on each side of boiler)
Size of Blow Off connections	2"x1½"	2"x1½"	2"x1½"	2"x1½"	(Brass bushings, and located in bottom of throat sheet under barrel.)
No. Blow Off connections	1	1	1	1	
Size of Gauge Cock connections	½"	½"	½"	½"	
No. of Gauge Cocks	3	3	3	3	
Size of Water Guage	½"	½"	½"	½"	
Size and Length of Water Glass	⅝"x12"	⅝"x12"	⅝"x12"	⅝"x12"	
Circumference of bonnet for stack	70"	82"	82"	87"	
Diameter of Stack	22"	25"	25"	25"	
Length of Stack	28'	28'	28'	28'	(Two or more sections of equal length)
Gauge, material of stack	No. 12	No. 12	No. 12	No. 12	
Size hand hole plates, Smoke Box End	3½"x4½"	3½"x4½"	3½"x4½"	3½"x4½"	
No. hand hole plates Smoke Box End	1	1	1	1	
Sizes all other hand hole Plates	3"x4"	3"x4"	3"x4"	3"x4"	(See note below regarding location of hand hole plates.)
Number all other hand hole Plates	10	10	10	10	
Size Manhole Plate	..	11"x15"	11"x15"	11"x15"	(To be placed in shell above tube.)
No. Manhole Plate	..	1	1	1	

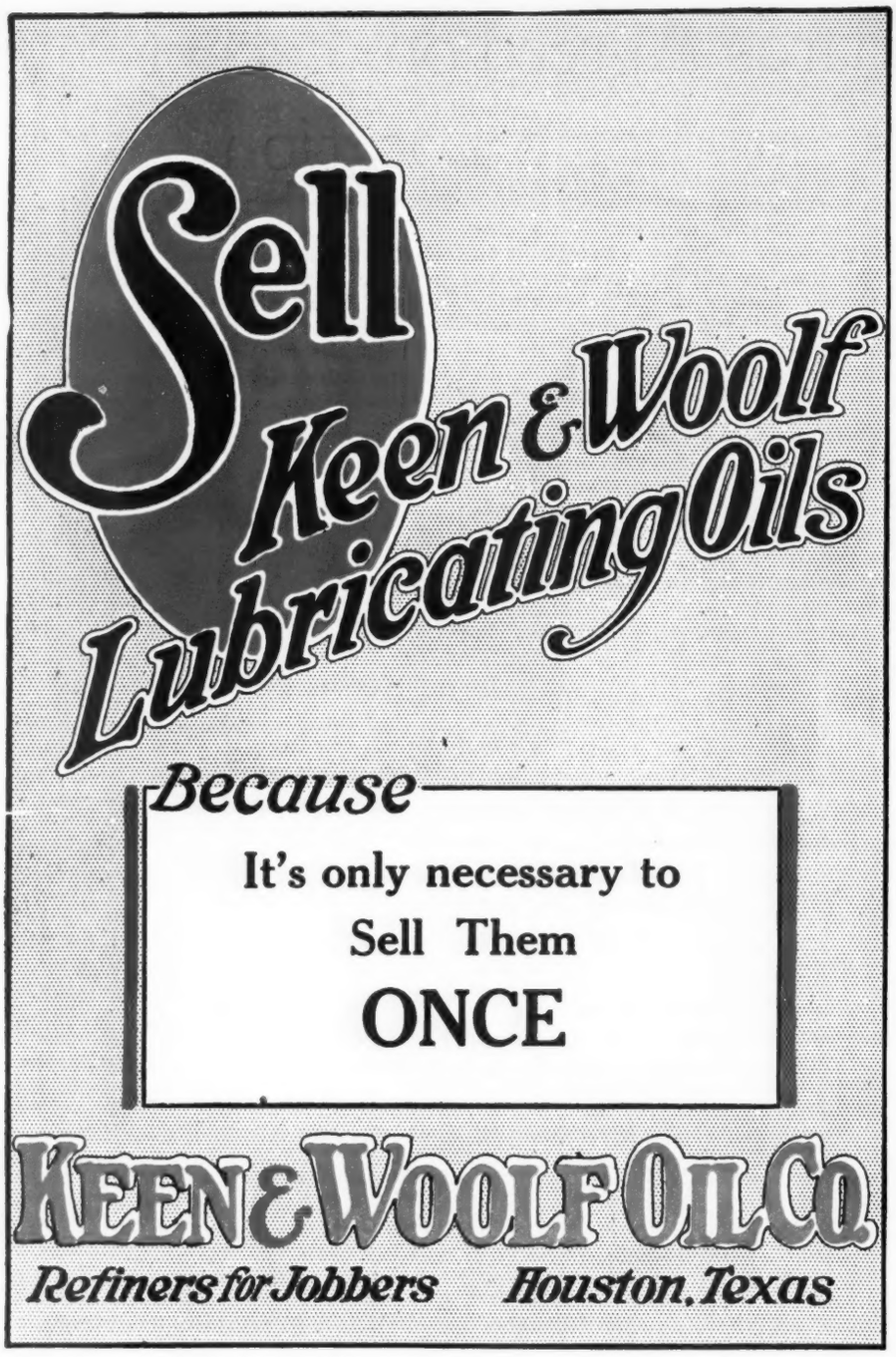
NOTE:

Location of hand hole plates

4 in outside wrapper sheet on a line with crown sheet.
2 in throat sheet.
2 in front outside furnace sheet as close to mud rim as possible.
1 below tubes in rear tube sheet.
1 in front outside furnace sheet on a line with crown sheet.

Table No. 3—Standard List of Fittings

	30 H. P.	50 H. P.	65 H. P.	85 H. P.
40' Guy Wires	4	4	4	4
Steam Guage 0 lbs. to 300 lbs	1	1	1	1
Brass Radiator Syphon with Cock and Test Gauge Connection	1	1	1	1
2" Brass Pop Valve ASME	1	1	1	1
Gauge Cocks	3–½"	3–½"	3–½"	3–½"
Blow Off Cocks	1–1¼"	1–1¼"	1–1¼"	1–1¼"
Globe Valve for Feed Water	1–1¼"	1–1¼"	1–1¼"	1–1¼"
Horizontal Check Valve Feed Water	1–1¼"	1–1¼"	1–1¼"	1–1¼"
Nipples	‡3–1¼"x2½" †	2–1¼"x2½" 1–1½"x2½"	2–1¼"x2½" 1–1½"x2½"	2–1¼"x2½" 1–1½"x2½"
Brass Bushings	3–1½"x1¼"	1–1½"x1½"	1–1½"x1¼"	1–1½"x1¼"
Water Gauge Connections	1 Set	1 Set	1 Set	1 Set
Water Gauge Glass	1–¾"	1–¾"	1–¾"	1–¾"
Niggerhead	1–3"	1–3"	1–3"	1–3"
Steam Outlet Nipple	1–3x4"	1–3x4"	1–3x4"	1–3x4"



feel that the California committee should make recommendations on the entire question of return tubular boilers for drilling purposes, such as size, etc., as that district is the only one using this type of boiler to any extent.

Size of Hand Hold Plates

"CALIFORNIA recommends 3½x 4½ inch. In previous meetings of the main committee at which this subject was discussed the operators strongly favored the 3½x4½ inch only, but the manufacturers raised several objections, mainly, that in some locations the spacing of staybolts prevented the use of a size larger than 3 x 4 inch, except for the smoke box end, where agreement was reached on the 3½ x 4½ inch.

"It is claimed, however, by some operators that the spacing of the staybolts can be so made that the 3½ x 4½ inch can be used."

Mr. Steen points out that this matter is being taken up again with the manufacturers, who are asked to submit in detail the objection to the larger hand hold plate, so it will be a matter of record.

UNDER the head of special construction the following reference is made:

"California recommends the minimum clearance between outside of tubes to be one inch and that the minimum distance from top of flue to inside of top of shell be 16 inches; and also that there be a minimum clearance between any tube and the boiler shell, equal to the diameter of the tube. It is also recommended that all tubes be in symmetrical rows without staggering."

After considerable discussion of the modifications recommended by the California sub-committee, Mr. Steen says it was decided to refer this report by circular letter to all members of the national committee for future consideration and action.

Specifications As Approved

A. P. I. specifications for oil field boilers, as they now stand approved by the board of directors of the Institute are as follows:

I. Material Covered

1. These specifications apply to boilers for oil field use of the locomotive, or firebox type. Four sizes are considered standard as follows:

Table No. 1

Size Boiler	Working Pressure	
	Class No. 1	Class No. 2
30		150 lb.
50		150 lb.
65	175 lb.	150 lb.
85	175 lb.	150 lb.

II. Method of Determining Horsepower

2. Ten square feet of heating surface shall constitute one horsepower; area of heating surface shall be calculated as stipulated in the A. S. M. E. Boiler Code (Page 58, Page 274), which provides that only the total area of surface in actual contact with the hot gasses shall be considered.

III. Workmanship and Finish

3. A. P. I. Standard Boilers shall be manufactured in accordance with the A. S. M. E. Code, including any amendments or modifications that may be added from time to time to such Code.

Special Construction:

The following conditions shall be observed in manufacturing A. P. I. Standard Boilers: (Locomotive Type).

(a) Front head above tubes to be stayed with diagonal stays.

(b) Rear furnace sheet above crown sheet to be stayed with diagonal stays.

(c) 11" x 15" manhole to be placed in shell above tubes. (Except on 30 H. P.)

(d) Safety valve connection to be placed on side of dome.

(e) On Locomotive Type Boilers the dome shall be located over the barrel or over the firebox, as may be desired.

IV. Standard Dimensions

4. Boilers manufactured in accordance with Tables No. 2 and 3 (attached) are standard.

Fittings:

Locomotive or Firebox Type:

4. (a) Fittings for A. P. I. Locomotive or Firebox Type Boilers shall be in accordance with Table No. 3, attached.

4. (b) It is recommended that the fittings listed in Table No. 3 be furnished at the option of the purchaser.

V. Marking

5. Boilers manufactured in accordance with these specifications shall be

stamped with a steel stencil with the official A. P. I. monogram, the A. P. I. horsepower rating and working pressure. No boiler shall be stamped with the A. P. I. monogram which does not comply with these specifications. Authority will be granted to use the A.P.I. monogram in accordance with the rules and conditions contained in the appendix.

5. (a) All boilers manufactured in accordance with these specifications shall be stamped with the manufacturer's name and identifying mark, as well as any special marking imposed by the A. S. M. E. Boiler Code, or by the laws of any individual state requiring special marking.

5. (b) The A. P. I. monogram shall be applied with a steel stencil directly below the A. S. M. E. or state symbol, size of monogram to be 1" high.

VI. Inspection

6. In addition to the inspection provided in the A. S. M. E. Code, the inspector representing the purchaser shall have free entry at all times while the work on the contract of the purchaser is being performed, to all parts of the manufacturer's works which will concern the manufacture of the material ordered hereunder. The manufacturer shall afford the inspector, free of charge, all reasonable facilities to satisfy him that the material is being furnished in accordance with these specifications. All tests and inspection shall be made at the place of manufacture prior to shipment, unless otherwise specified, and shall be conducted so as not to interfere unnecessarily with the operation of the works.

6. (a) Where inspector representing the purchaser desires to witness these tests, reasonable notice shall be given of the time at which the run is to be made.

VII. Rejection

7. Boilers manufactured in accordance with these specifications which prove to be defective subsequent to acceptance at manufacturer's works or when properly applied in service, may be rejected and the manufacturer shall be notified. No rejections, under these or any other specifications, are to be stamped with the A. P. I. monogram, or sold as A. P. I. material. When a boiler stamped or marked with the A. P. I. monogram is rejected, such monogram shall be cancelled as follows:

7. (a) A steel cancelling stencil, one-half inch square, shall be applied twice, first horizontally, the stencil then turned 90 degrees and applied the second time.

HICKSVILLE, O.—H. K. Crouse, garage proprietor, has purchased a building adjoining his garage here. He is enlarging his garage and adding two gasoline pumps. Marland Refining Co.'s products are handled exclusively.

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ON ALL LITTLE GIANT TRUCK TANKS

Biggest discount ever given will apply on all orders for Little Giant Truck Tanks placed during May.

Little Giant comes complete painted and furnished in any color you desire—ready to mount. There are no extras to pile up the cost. Every Little Giant is individually built to the truck upon which it is to be mounted.

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STEINKE BROS. MFG. CO.
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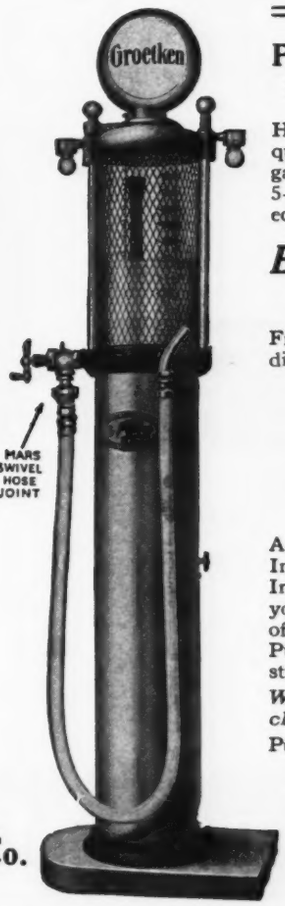
Compare This Pump with others!



Special Pump used to fill the Resevoir. Handle type—up and down movement. Long fulcrum. 19 easy strokes to fill 10-gallon reservoir. Like one of our customers remarked: "Never misses a stroke." We receive many comments and praises on our JUMBO Pump.

VISIBLE ATTACHMENTS for all makes of Pumps.

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PUMP BUSINESS is good. WHY?

Have you received our latest quotation on our No. 76 10-gallon VISIBLE and No. 57 5-gallon VISIBLE fully equipped?

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A standard Pump for 7 years. Improved from time to time. In addition to price we give you an attractive Pump, best of material, long life. Visible Pumps we sold in 1919 are still in Service.

Wet or dry hose—No extra charge.

Pump business is good. Why?

If you could see the remarks and comments received with our orders, e. g. "Your new quotation is very gratifying. Your pumps are O. K. and satisfactory. We will order more Pumps shortly."

Our storehouse is well supplied. Immediate shipment.

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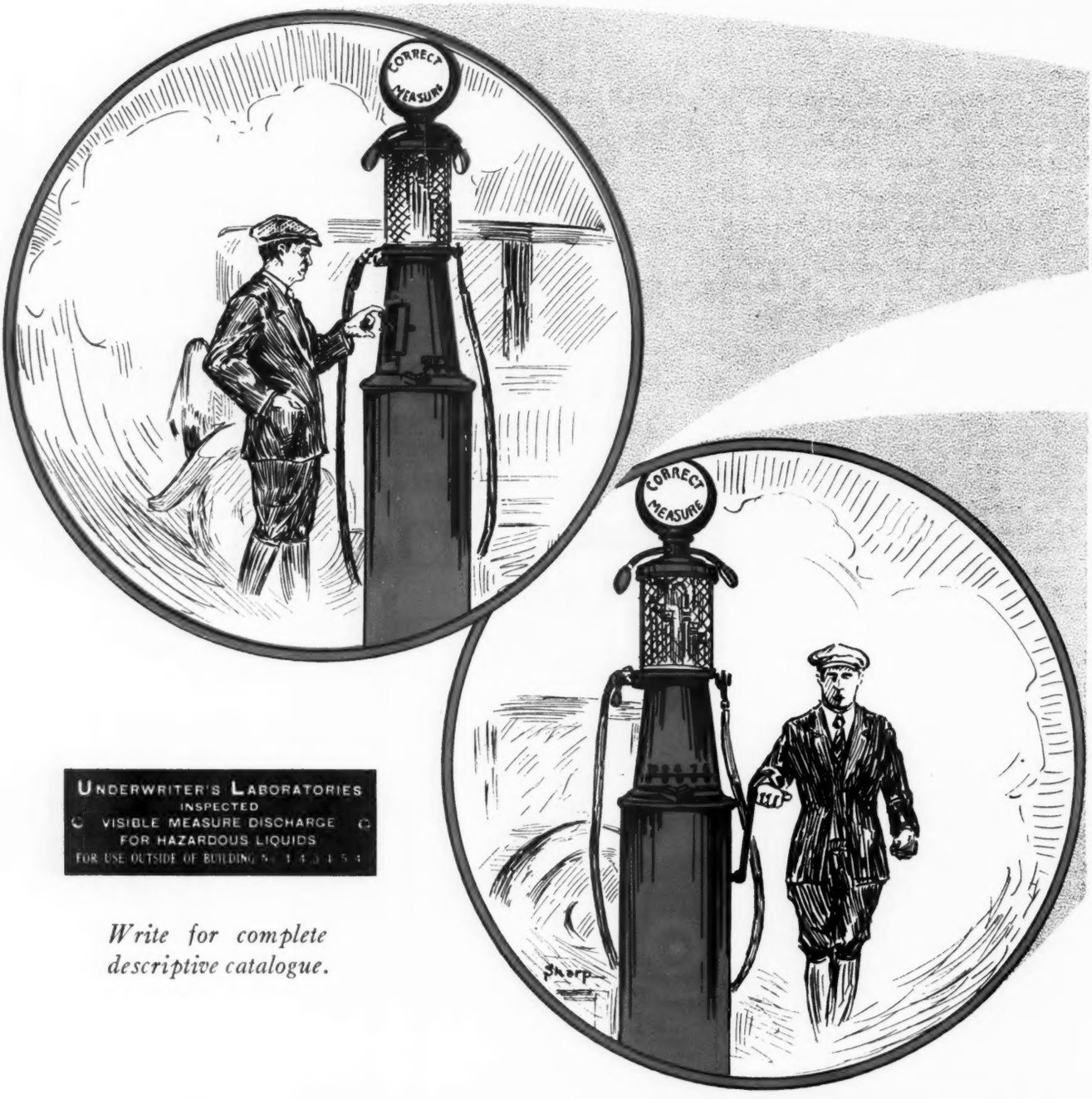

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CORRECT MEASURE PUMPS

Hydraulic Pumps Successfully Used In Tonkawa Deep Wells

By A. F. Hinton
N. P. N. Staff Writer

TULSA, May 15.

THE deep wells at Tonkawa and Garber, where production is obtained at depths of 4200 feet and lower, and which make large quantities of fluid, have been difficult propositions to handle after reaching the pumping stage of their existence. Many expedients have been tried, first, to keep the wells flowing as long as possible, and, second, to pump them successfully and profitably under the severe conditions presented. These expedients include the use of artificial stimulation in the form of compressed air or gas to flow the wells, and the use of various designs of long-stroke pumps. The alternative to the use of either of these methods is swabbing, which is very expensive and not altogether satisfactory.

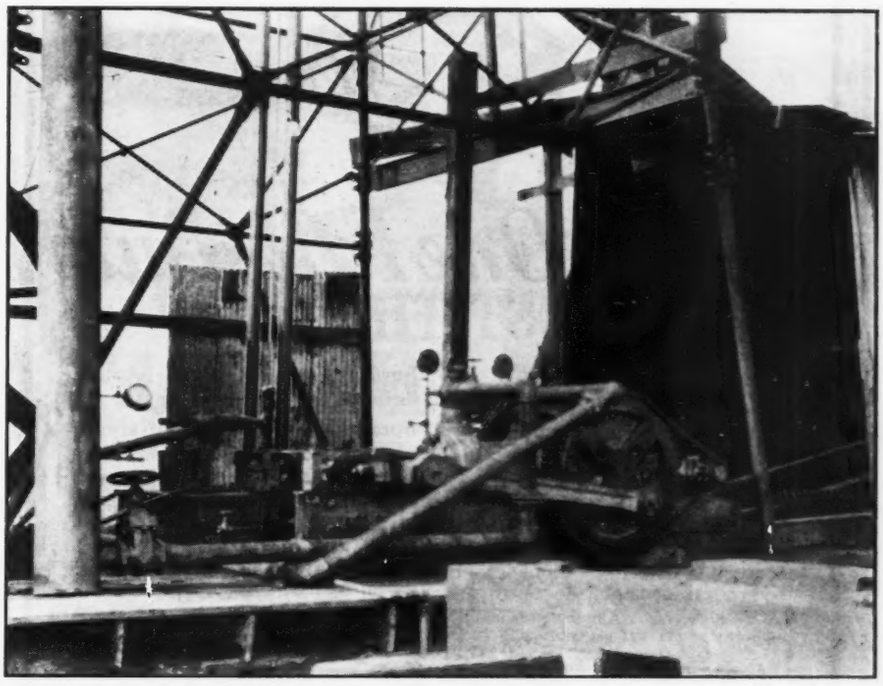
California operators' having been pioneers in the art of pumping deep wells, it is natural that the Mid-Continent should look in that direction when confronted by problems already solved on the Pacific coast. The most recent innovation in pumping equipment at Tonkawa and Garber is a California product, having been used successfully for some time in the fields of that state, and it seems to be performing satisfactorily in Oklahoma.

This device, new to the Mid-Continent field, is the hydraulic pumping unit, manufactured by the Pacific Oil Tool Co. It is already in use on approximately 20 wells of the Wentz Oil Corp., Marland Oil Co., Sinclair Oil & Gas Co., Gypsy Oil Co., and Blackwell Oil & Gas Co. The Sinclair units are being used in the Garber field, all the others being at Tonkawa.

The unit is designed to give a long, even stroke, with a very easy change in direction at top and bottom of stroke and operates so as to provide an absolutely vertical stroke. It will provide stroke up to 10 feet, with speed up to 20 strokes per minute. It operates on the hydraulic jack principle, with compressed air cushion or counterbalance, and is operated by gas engine or whatever motive power the operator desires to use. The cost is somewhere in the neighborhood of $4,000, an amount which of course necessitates a study of well condition to determine whether or not it is economical to buy one of these units. However, this is only slightly more than the cost of one month's swabbing of one of these deep wells.

Description of Unit

The hydraulic pumping outfit consists essentially of three principal parts, the hydraulic jacks, the pump, and the pressure tank or compensator. The hydraulic jacks are cylinders five inches in diameter and 20 feet long, blind at one end and with stuffing box at open end. Plungers operating inside the cylinders are 4¾ inches in diameter. The plungers are connected at the top by a crosshead from which the polish rod is suspended. The cylinders are sunk on each side of casing-head with stuffing box at level of derrick floor. Bottoms of cylinders are connected with a three-inch pipe manifold.



—N. P. N. Staff Photo

Hydraulic pumping unit in use on Wentz Oil Corp. McKee lease, Tonkawa field.

—N. P. N. Staff Photo

I. J. Keeney, construction foreman, Wentz Oil Corp., Tonkawa field.

Hydraulic action is obtained through the use of single cylinder, double-acting, 15¼-inch bore by 16¼ to 23¼-inch stroke, piston type power pump. This pump is placed on derrick floor, as shown in picture accompanying this article, and is driven by chain drive from sprocket on band wheel shaft, the band wheel being belt driven by any convenient means of power. The usual installation at Tonkawa is a 40-h. p. gas engine. This size engine has been performing satisfactorily, but it is likely that a 50 h. p. engine would be better.

The pump frame carries a 4-inch jack shaft with a 21-tooth gear in the center, driven with one chain from a 52-tooth sprocket on the band wheel shaft. The jack shaft has double chain drive on each end, driving discs on each end of 5-inch main shaft. Four holes in these discs can be used for connecting rods to adjust stroke, the holes being at varying distances from center of disc. Connecting rods on each side drive from

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Only One Fall-But IT LOST THE RACE

He fell at the last hurdle, but it might just as well have been the first. The race was lost anyway.

Oil marketing is just one hurdle after another. Good oil, the proper grade of oil, prompt shipment and prompt delivery, all present their difficulties. Good marketing consists in overcoming, not most of the hurdles, but all of them—and doing it all the time.

Spencer service is satisfying service because it is the type of service most oil buyers want—pleasant and smooth running, with the reserve power to cope with emergencies when they arise—the type of service indicated by the letter below:

"Referring to your letter of March 23rd, we are glad to report that the subject car of fuel oil arrived here from Louisiana in six days.
"This is indeed a wonderful run and we congratulate you on your service."
(Name on request.)

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If you want to buy it—turn to the classified advertising page at the back of this issue. If what you want is not listed there, why not insert an advertisement of your own next week?

If you want to sell it—follow the same course.

There is a constant market in used oil equipment. Take advantage of the great savings possible, either by selling what you no longer need or buying what you do need.

National Petroleum News
892 Caxton Building — Cleveland, Ohio

discs through crosshead to the piston. The gear ratio of the jack shaft to main shaft is 6 to 1, so that one stroke of pump requires 2.4 revolutions of band-wheel shaft. The front end of the pump cylinder is conected through 4-inch pipe to manifold at bottom of hydraulic jacks. When pins are set in the first hole in discs, displacement of pump in one stroke will raise plungers seven feet. The other holes give strokes of eight feet, nine feet, and 10 feet, respectively.

The pressure tank or compensator is made of a piece of 15½-inch pipe, 20 feet long, and stands on end in a corner of the derrick. It shows at the left side of the picture in Fig. 1. It is connected by a 4-inch line direct to the back end of the pump cylinder, on the opposite end from the hydraulic jacks. This tank must be pumped up to certain pressure before the unit is put in service, necessitating the use of a small compressor if air is not available on the lease.

How It Works

TO start up the unit, the entire system is filled with water up to a four-foot level and air pressure is created in the tank, after which the pump is started. A one-half complete stroke of pump displaces the plungers and raises the polish rod seven to ten feet as desired at rate of 8 to 20 strokes a minute. In a well 4200 feet deep with 2½-inch tubing and barrel, this requires a pump pressure of 450 pounds per square inch. Assuming the load of rods and column of fluid at 200 pounds per square inch, there is a difference of 250 pounds between the pickup pressure and back pressure. Air in the compensator tank is built up to a mean between these two pressures, or, in this case, 325 pounds. Thus when the pump is raising the rods, the compensator is aiding, while on the down stroke it is retarding. The driving unit thus must exert as much power to lower the hydraulic packs as to raise them.

In using this unit at a 9-foot stroke, 20 strokes per minute, the effective rod travel is 180 feet per minute, with the band wheel moving at 48 revolutions per minute, thus permitting a higher engine and belt speed. An ordinary beam pumping rig, with 5-foot stroke, would require 36 strokes per minute to obtain the same effective rod travel. This would of course be severe on rods, rig and all equipment.

On account of the long stroke, the usual practice is to use a 17-foot plunger type working barrel. The outfit also requires a long polish rod, usually 20 feet. The rods and balance of well equipment are the same as used in general practice.

One company in the Tonkawa field, which has been using one of these pumping units in a 4200-foot well, states that before installation of the unit, the well was pumping on the beam with standard rig, and produced from

205 to 287 barrels of fluid daily. Since installing the unit, the well has made from 610 to 938 barrels of fluid per day. Other companies report equally increased production and state that the units have been operating for long periods without shutdowns.

Spokane Council Ousts Gasoline Curb Pumps

SPOKANE, WASH., May 17.—All curb gasoline pumps here must be removed by Jan. 1, 1927 by order of the city council, as a result of a long-standing fight between service station owners and curb pump operators, the former charging that curb pumps were a nuisance and obstructed traffic.

After ouster proceedings had been started by the service station operators, against curb pumps, some curb pump owners cut gasoline prices as much as three cents below the prevailing price.

One garage operator stated that only two months ago he had installed a curb pump at his garage at a cost of $400 as a convenience to his customers. He charged the service station operators with an attitude of unfairness inasmuch as he had made no effort to go after general retail gasoline business. He then started a price war, cutting his retail price 3 cents below the market, giving himself a 1 cent margin which, he said, would cover part of the overhead.

The decision handed down by the supreme court at Walla Walla some time ago, gave property owners the right to compel by mandamus proceedings action on the part of the council to oust the curb pumps.

Run Levels in Panhandle

AMARILLO, May 15.—Through efforts of oil company geologists now working in the Amarillo district, the U. S. Geological Survey has placed a party in the Panhandle to run a line of precise levels through the oil territory. The work is being done on a cooperative basis, the oil companies furnishing the money and the Survey the men and equipment. The party is now in the field, running a line of levels from McLean, Gray county, along the granite ridge into the Hutchinson county field, thence west into Moore and Potter counties, and thence back to Amarillo. It is planned to set an official U. S. bench mark every two miles along the survey. Similar cooperative work carried out in the Wichita Falls area was very helpful in oil operations.

OSCEOLA, IA.—Emery Rowland, manager of Sheridan Oil Sales Co., with general offices here, has purchased the remaining half interest in the company and changed the name to Rowland Oil Co. Mr. Rowland had bought a half interest four years ago.

More Business Thru Better Marketing

Large oil marketers and refiners recognizing the importance of better equipment in increasing sales have standardized on Brookins Oil Measures. For instance, 1800 Brookins Measures have just been shipped to The White Eagle Oil and Refining Co. at Kansas City.

Brookins Measures make easy work of serving hard-to-reach oil intakes. They quickly and accurately serve from one to five quarts of oil in one operation, without funnels and without wasting a drop of oil.

Brookins Gas Can

The *Brookins Portable Drain Tank* makes easy work of draining any crankcase. You simply shove it under the car, start the flow of oil, and that's all there is to it. It costs but little and pays for itself in a few days.

With Brookins Portable Drain Tanks and a set of Brookins Oil Measures you can give your customers a *complete* oil service.

Order Brookins Portable Drain Tanks and Brookins Oil Measures from your jobber today.

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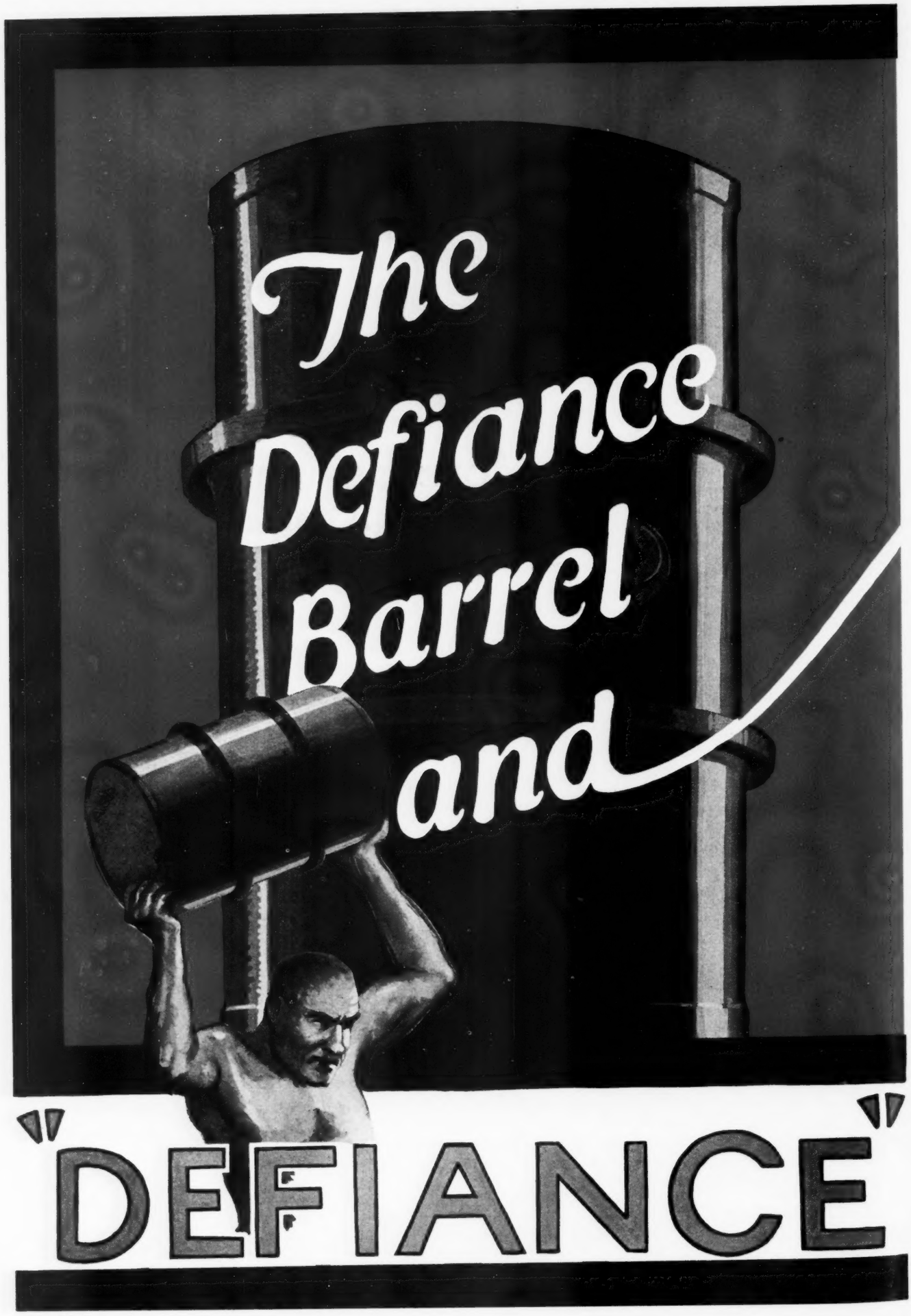

The Defiance Barrel and
"DEFIANCE"

Second Field on Texas University Lands Now in the Making

By Paul Wagner
N. P. N. Staff Writer

FORT STOCKTON, TEX.

A TRAIL that leads northwesterly toward the center of Crane county from the Hurdle district swings back in the form of a question mark to reach the latest prospect of important oil production indicated for the west Texas territory.

The airline distance to the discovery well of the new field is only about 18 miles, but a long and tortuous drive through ranch gates and among mesquite brush patches is necessary to reach the location of this latest outpost of production in University of Texas sec. 34, block 30.

Although showing more or less oil for upwards of a month, the well remains in an uncompleted stage and its real worth on a production basis is still to be proved. The Magnolia Petroleum Co., which is operating the well after purchase of a part interest in it from Church & Fields, has recovered as much as 190 barrels of 30.7 gravity oil from it daily at total depth of 3040 feet, two feet in the pay horizon.

The well, now known as the Magnolia's No. 1 University, is making some water with the oil, but this intrusion of brine is generally regarded as coming in from above rather than having its source in the pay horizon. The finishing of the well probably will be accomplished either by under-reaming the 8¼-inch casing to the top of the pay for completion or by the setting of a string of casing.

Oil Comes Through Cavings

OPERATORS interested in the territory point out that it is significant that the production already obtained from the well is coming through 15 to 20 feet of cavings in the hole, this condition meaning to them that improvement should result from its cleaning out and proper completion.

A diversity of interests constitute the control of prospective oil properties in the new development area, this condition resulting from a number of trades that followed the original showing of oil at the time Church & Fields were operating the well.

Magnolia Petroleum Co., which was the first purchaser in the area, acquired operating control of the well along with a one-sixth interest in the 40 acres on which it is located; the deal as a whole also involving the transfer of approximately 1200 acres of University lands in Sec. 30 to the Magnolia.

Terms of the Magnolia deal, which were first announced in this periodical several weeks ago, called for the payment of $200,000 in cash and $250,000 to be paid out of oil produced.

Later, the O'Keefe Brothers and J. D. Collett, the last mentioned president of the Texas division of the Mid-Continent Oil & Gas Association, sold some 1400 acres surrounding the well to the Simms Petroleum Co., and the Atlantic Oil Producing Co., for $100,000 cash and $400,000 in oil.

Mr. Collett and the O'Keefe Brothers, C. A. and J. T., retained some acreage around the well.

More recently, the Tidal Oil Co. purchased from Maxwell & Turman a half interest in 1350 acres which carries with it operating control. The consideration involved in the Tidal deal was not made public, but it is understood to involve a substantial payment and drilling obligations.

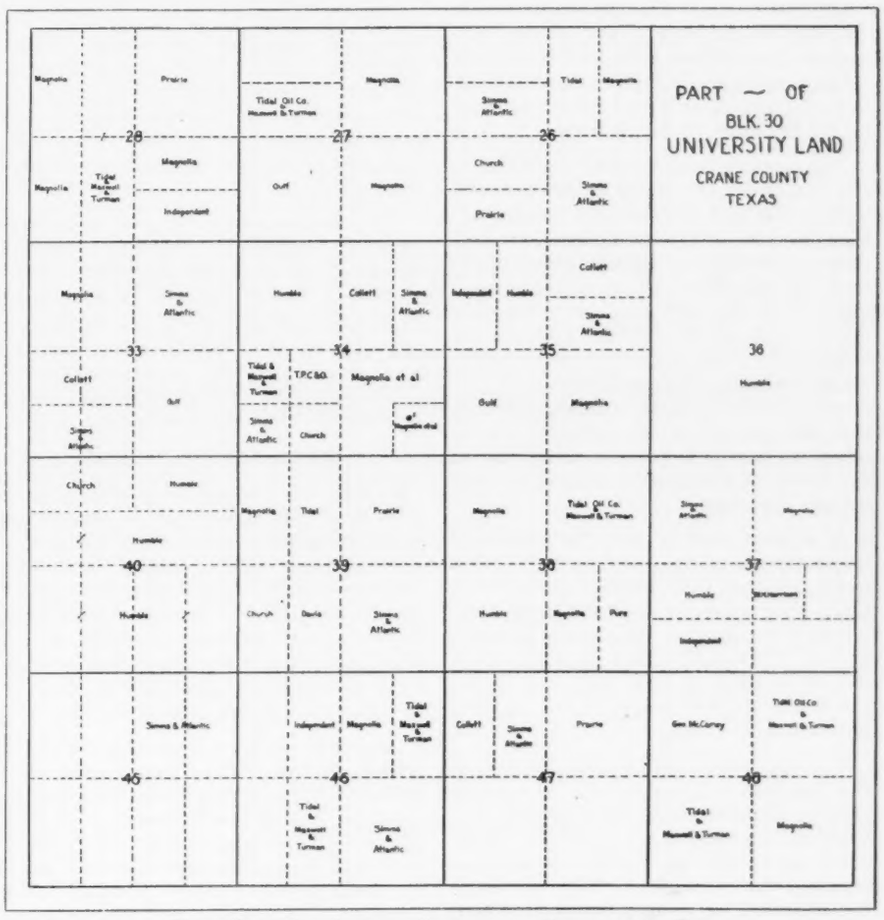
The Tidal deal also involves an interest in the discovery well, which was drilled by Church & Fields after the pooling of permits on University Lands for development purposes. O'Keefe & Collett et al originally held the University permits, in which Turman & Maxwell and Church & Fields acquired interests by participating in drilling.

It is of interest, parenthetically, to call attention to this area as the second in which oil production has been found on University Lands, the first having been the prolific Big Lake field of Reagan county, about 40 miles east and 20 miles south.

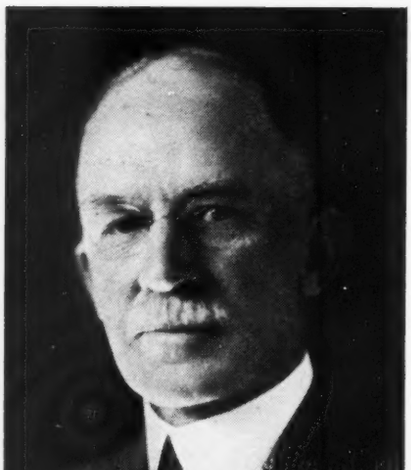
Humble Building Storage

HUMBLE OIL & REFINING CO. has made arrangements for the building of a first 55,000-barrel steel storage tank to take care of production from the new Crane county discovery. No plans have been announced for a pipe line outlet, which will depend upon future production and contracts with producers.

The Humble's nearest pipe line connection is at Kemper station, in southern Reagan county, where it receives Big Lake field crude under its contracts with the Reagan County Purchasing Co.



Magnolia well and surrounding acreage, Crane county, Tex.



J. D. Collett

President of the Texas division of the Mid-Continent Oil & Gas Association, whose sale of holdings in Crane county to the Atlantic and Simms Companies has already shown a profit.

(Marland) and the Big Lake Oil Co. Humble is handling 30,000 barrels daily through this recently looped line to Comyn, in Comanche county, where connection is made with its main line south out of the Ranger territory.

Humble's steel storage construction adjacent to the new Crane county discovery is considered to be preliminary to any extension of pipe line facilities to important West Texas fields that may be shown later to be desirable.

The nearest loading rack facilities to the new field are those being installed by the Marland interests on the Kansas City, Mexico & Orient railroad, to take care of production in the Hurdle district, the western part of which is now marked by the Independent Oil & Gas Co.'s well near the Crane-Upton county boundary. Plans are being made by the Marland interests to take care of production in this general territory, through the hooking-up of gathering lines to other wells which may be completed to the north of the Hurdle district as now being developed.

A wildcat well of the Zoch-Marland interests, about two and a half miles north of the Independent Oil & Gas Co.'s first well in Crane county, has pumped as high as 110 barrels in eight hours. This well, which produces from lime formation at 2564-2570 feet, is on the Keith-Hughes ranch, in sec. 92, east line of Crane county.

For the purposes of this discussion, the Marland-Zoch well will be considered as being located in the Hurdle district, which produces from line horizons productive at levels varying according to elevations but generally found at drilling depths below 2100 feet. The Hurdle district will be discussed in greater detail in a separate article, the University Lands discovery in Crane county being treated as marking the initial development of a separate pool.

Production Below Sea Level

THE University Lands well operated by the Magnolia is the first completion in the Permian age salt basin of West Texas to produce from a depth below sea level since the development of the Big Lake field in Reagan county. With the exception of a limited number of "'shallow" wells exploited at about 2400 feet, the development of the Big Lake field has been in a prolific pay horizon found at approximately 200 feet below sea level. Production in the Magnolia (Church & Fields) well comes from a depth approximately 320 feet below sea level.

Hurdle district oil comes from the lime horizon at roundly 500 feet above sea level; World pool production, 16 miles south of the Big Lake field and across the line in northern Crockett county, comes from a depth 200 feet above sea level; and the showings found in the Todd ranch test of Cook et al, in Crockett county, which was taken over some time ago by The Texas Co., were at approximately 700 and 900 feet, respectively, above sea level.

Production in all these areas is almost invariably found at an interval of about 100 feet below the top of the lime, which underlies the salt deposits of the basin, regardless of surface elevation. In this connection, the reader is referred to page 81 of the April 7, 1926 issue of National Petroleum News, which carried a United States Geological Survey map indicating the approximate edge of the salt basin and a discussion bearing on the chemical deposition of the salines, gypsum and anhydrite of the area.

The discussion mentioned takes account of conditions referred to by H. W. Hoots of the geological survey in Bulletin 780-B and includes a brief abstract of remarks by Dr. W. A. J. M. Waterschoot Van der Gracht of the Marland Oil Co. of Delaware before the recent Dallas meeting of the American Association of Petroleum Geologists.

Wildcatting Out In Basin

A RESULT of the Magnolia (Church & Fields)) well is to encourage wildcatting farther out from the rim of the salt basin than formerly, increasing interest in this part of West Texas now being found. Much of the available acreage in a northwesterly direction toward the New Mexico boundary had already been taken up in great blocks, both in the basin itself and around its rim.

The rim follows approximately the course of the Pecos river, on its west side, through parts of Pecos and Reeves counties, to the south boundary of New Mexico. The east side of the basin is delimited in northeastern Crockett county, northeasterly through parts of Irion, Sterling, Coke, Nolan and Fisher counties, by drilling which found no salt deposits.

Ector, Andrews and Gaines counties are now getting attention from traders who have taken up vast blocks of leaseholds out in the basin, many of them at prices as low as 25 cents an acre. These blocks are generally cut up into smaller units and sold off at materially higher prices, some of the companies now paying as high as $1 an acre for fairly extensive holdings.

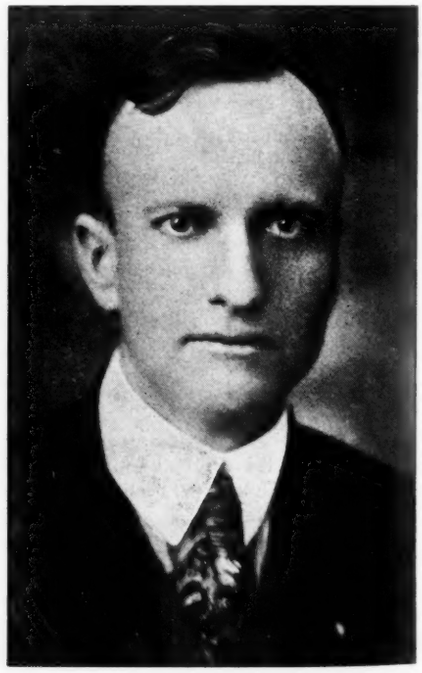
Surface indications of structure are few and only generalized geology may be considered to indicate possibilities out in the center of the salt basin, where sub-surface "highs" in the old sea-bottom are the inferred sources of such future fields as may take rank with Big Lake development. For this reason, many operators will prefer to go slow on leasing now and pay higher prices close-in to future discoveries.

The northern part of Crane county, where the Magnolia well is now creating its stir of interest, is almost entirely composed of University Lands handled under permit filings.

Two Ways Into Territory

ENTRANCE into this part of Crane county may be effected either by the winding trail that leads over rough ground from the Hurdle district into the sand hills that surround the Magnolia well or the territory may be reached from Midland, on the Texas & Pacific railroad, about 40 miles north and east.

Although the writer reached the well by driving in from the Hurdle district, and has never traversed the ingoing road from the north, the final stages may be described as such that the main advantage of making the trip from Midland, if



J. H. Jenkins of Fort Worth, vice president of the Tidal Oil Co., in charge of Texas producing activities, under whose direction will come the Crane county operations resulting from a deal affecting University Lands previously held by Maxwell & Turman.

any, would hinge upon railroad connections and individual plans of a visitor.

Supplies will have to be taken into the territory on trucks, either from the Hurdle district, on the Kansas City, Mexico and Orient railroad, or from Midland, on the Texas & Pacific. The nearest supply houses on the K. C. M. & O. are at Best, Texas, east of the Big Lake field, in Reagan county, from which the Hurdle district, 40 miles west, now draws its equipment. Supply posts on the Texas & Pacific railroad, which may be drawn on through Midland, are located at Colorado City, 75 miles east of Midland, or in the Ranger territory, about 200 miles east.

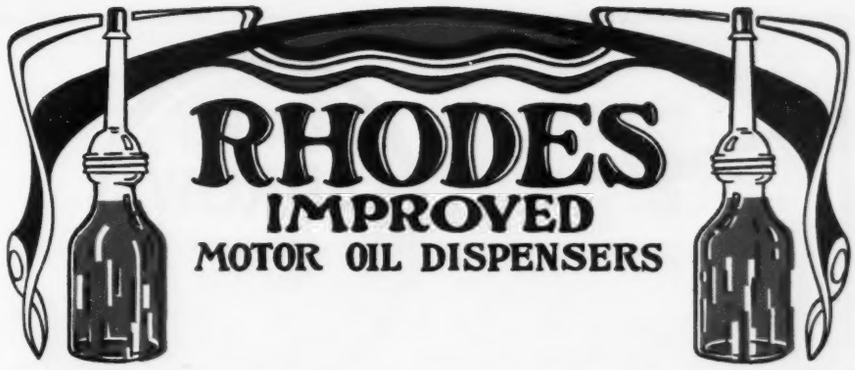
It is probable that supply houses maintaining stores at Best will find it necessary soon to install branches at Crossett or McCamey, twin settlements one either side of the K. C. M. & O. right-of-way in western Upton county, and these may prove the main sources of equipment until more is known of the future development of the general region.

Would Grant Permits On Unallotted Lands

Staff Special

WASHINGTON, May 15.—The Senate committee on Indian affairs has made a report on the bill introduced by Senator Cameron of Arizona providing for the grant of exploration permits and leases on unalloted lands in Indian reservations created by proclamation of the President, setting aside lands out of the public domain, for the use and benefit of Indians. There are a number of such reservations, particularly in Arizona and New Mexico. Reservations in the middle west were created by means of treaties between the United States and the various tribes. Such reservations are known as treaty reservations. The lands in them are subject to exploitation on terms made between the United States as guardian and the Indians, as for instance the Osage reservation.

The Cameron proposal is to have the executive order reservations thrown open to exploration and exploitation under the terms of the national leasing law, subject to restrictions for the benefit of the Indians, under terms similar to those under which the treaty lands are developed; that is, by sale of leases, the collection of royalties by the Secretary of the Interior, the exaction of state taxes on production and things of that sort. It also provides for taking care of those who have gone upon such lands and have done real exploration and exploitation work. The proposed law, however, specifically provides that it shall not be construed as recognizing that the filing of claims under the national leasing act created any sort of vested right in the part of the person so filing.



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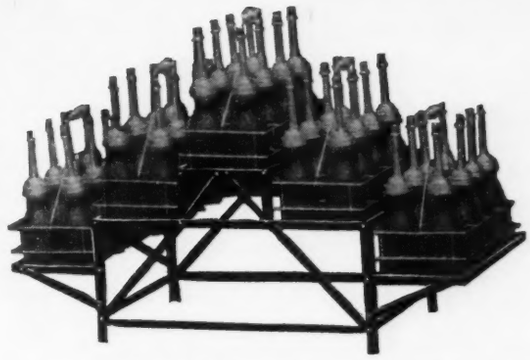

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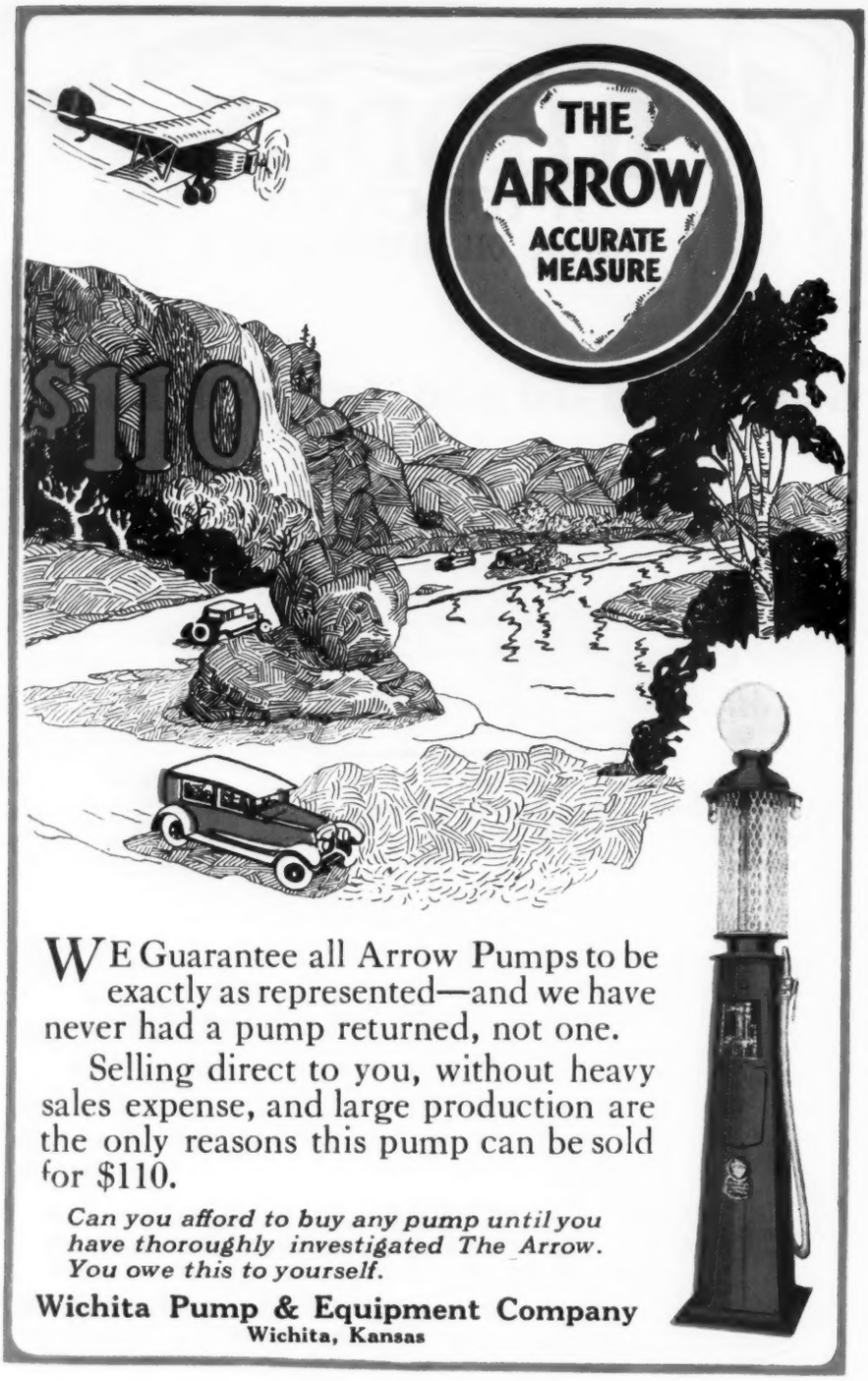

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Seek Uniform Method For Strapping Cars

Staff Special

TULSA, May 15.—Uniform methods for the calibration of tank cars and uniform practice in the matter of granting outrage claims on natural gasoline shipments were the principal subjects discussed at a meeting of the traffic managers, held in connection with the convention of the Association of Natural Gasoline Manufacturers at the Mayo Hotel May 5 and 6.

The traffic meeting was presided over by A. F. Winn, traffic manager of the Skelly Oil Co.

Discussion developed that much confusion has arisen and many disputes between buyer and seller have been caused by the fact that engineers of different companies use several different methods in strapping and calibrating their tank cars.

It was stated that a number of outside engineers are offering their services to the oil companies to strap their tank cars, usually representing that the cars, as calibrated by the car manufacturers, are in the buyer's favor.

There are two or three methods of strapping, all of which are approved by the Bureau of Standards, it was said, and each of them giving different results. Two engineers strapping the same car by different methods both methods being approved, get a different capacity.

It was voted at the meeting to refer to a committee the task of formulating a standard method of strapping and calculating the capacity of a car. When such a method is arrived at it is to be referred to the Bureau of Standards for checking and approval and is then to become the standard for the association, thereby calibrating all cars on a uniform basis and eliminating much confusion.

I. C. C. Postpones Action on Tank Car Rules

CLEVELAND, May 15.—The Interstate Commerce Commission has postponed action on the proposal that it take over the specifications for tank car tanks and appurtenances. Request for a delay of 60 days in any action by the I.C.C. was made April 21 by representatives of the American Petroleum Institute, representatives of private tank car interests, the American Railway Association tank car committee, and the Bureau of Explosives.

Arguments against incorporating tank car specifications in I.C.C. regulations, elimination of bottom outlet valves on tank cars, changes in the placarding rules for empty tank cars, vapor pressure tests, valve testing and related subjects, were presented to the commission by W. R. Boyd, Jr., assistant secretary and counsel of the A.P.I.

Advances In Natural Gasoline Industry Parallel Those In Oil Refining

Staff Special
TULSA, May 14

TECHNICAL advances in the manufacture of natural gasoline parallel closely the advances which have been made in the refining industry during the same period. Both have made great strides under the stress of necessity—the necessity of reducing costs to meet low markets.

Essentially the compression process is the same today that it was when it was first begun. But the compression plants of today are few and far between. A large number of plants which were using compression five years ago are now absorption plants, and it is in the absorption process that chief advances have been made.

Both refiners and natural gasoline operators have somewhat similar problems. The refining industry was the first to work out efficient fractionation, but the natural gasoline manufacturer has been working hard on the same problem for several years and his efforts are meeting with success.

When the need for lower operating costs became apparent in the gasoline industry one of the first steps resulting was the consolidation of small plants into larger units. This cycle began about 1922 and has been in progress since. In many cases competing companies pooled their gas supply and organized new companies to build large plants which could be operated at lesser costs per gallon of production.

Era of Consolidations

IN certain instances one company has been able to consolidate as many as a half dozen small plants in one field into a single large plant. In many cases owners of small plants have sold out to strong companies with the same result.

Probably the largest item of expense in building a natural gasoline plant is the installation of a gathering system and return lines for residue gas. With large plants this is particularly heavy since gas is often transported several miles before it is processed.

It is virtually impossible to effect much of a saving in the installation of gathering systems. The lines must be of good material, carefully constructed, or endless air troubles will be the result. It is estimated that the cost of gathering systems for many plants run from 50 to 60 per cent of the total investment.

One of the big savings in cost through consolidation of small plants or the building of original large units is in being able to handle large volumes of raw material with only a slightly larger force of men than is necessary in a small plant.

Much of the effort of natural gasoline manufacturers in recent years has been devoted to getting the greatest possible amount of gasoline from the gas available. Almost any kind of gasoline plant is able to knock the first 85 per cent of gasoline out of the gas. It is the last 15 per cent which requires manufacturing refinements to recover.

To obtain the greatest possible extraction of gasoline, manufacturers have given much attention to design and operation of absorbers. Horizontal absorbers have given way to vertical counter-current absorbers designed to obtain an intimate mixture of gas and mineral seal oil. These static absorbers are being supplanted now in many installations by new varieties such as the bubble type, foaming type, frothing type and the like. These absorbers are calculated to give an intimate mixture with no chance for channeling and to reduce the amount of oil circulation necessary by increasing saturations.

Improved Fractionation

IMPROVED fractionation of natural gasoline to discard dissolved fixed gases without excessive weathering losses constitutes one of the major advances in recent years in the industry. One of the first steps was when the Carbide & Carbon Chemicals Corp. announced its stabilizer. During the past two or three years high gravity, high recovery gasolines have formed a larger and larger percentage of the total production of natural gasoline and the extremely wild products of earlier days have disappeared.

Many improvements have been made in the design of stills recently. Many manufacturers consider the new vertical steam stills operating on the bubble tower principle as a big step forward in manufacturing practice. One of the important manufacturers in the Mid-Continent has come to the conclusion it will be economical for him to junk his present shell stills and install the vertical type because of the savings which will be made in steam consumption.

Increased efficiency in heat exchangers, preheaters and coolers has been obtained in compactly designed equipment. Former crude exchangers often occupied large areas and heat waste was much larger than today.

Heat Conservation

TECHNOLOGISTS of the industry believe there is still room for a great deal of improvement in heat conservation. In settled fields where producers need a large amount of residue gas for pumping and in all fields where there is a market for residue gas, any saving in the amount of fuel consumed is reflected in the earnings of the plant.

The general superintendent of one large group of plants is studying the possibility of using the exhaust heat of gas engines. As far as is known this heat is not used in any gasoline plant. Difficulties standing in the way of using this heat for preheating boiler water and distilling rich oil appear serious. Exhaust gases are very corrosive, more so even than flue gases at the oil refinery, and coils installed in the exhaust probably would be short lived. Gas engines often emit rather large quantities of unburned gas which would constitute a hazard.

Since the earliest days of the industry attempts have been made to use some form of refrigeration at gasoline plants. The mechanical expander was tried as well as ammonia refrigerating systems. Thus far these have not been strikingly successful and the industry stands large expense in cooling oil and water at its plants. Elsewhere in this issue will be found a discussion of a new refrigeration process just being developed which has tremendous possibilities for the industry when perfected. The idea has been developed by S. C. Carney of the Roxana Petroleum Corp. for use in connection with a stabilizer.

Industry of Age

THE natural gasoline industry has obtained its majority this year. The first natural gasoline plant of record was built 21 years ago by a retired preacher, William Mayburg. Three years later the Reno Oil Co. built the first successful commercial plant in West Virginia. Four years later in 1912 there were 250 compression plants in operation with a combined production for the year of 12,081,000 gallons.

The first commercial oil absorption plant was built in 1913 at Hastings, W. Va. by the Hope Natural Gas Co. This was built on the high pressure basis under the Saybolt patents. About the same time the National Oil Products Co. built a low pressure plant in the Cleveland pool in Oklahoma.

The maximum production of natural gasoline by the compression method was in 1921, 331,867,000 gallons as compared with 118,067,000 gallons from the absorption process. With the invalidation of the Saybolt patents the oil absorption process grew by leaps and bounds at the expense of the compression process.

In 1922 there were 648 compression plants, 226 absorption plants and 43 combination plants. The next year the number of compression plants dropped to 620, while the number of absorption plants jumped up to 327 and combination plants to 112. In that year compression plants produced 290,872,000 gallons, absorption plants 384,224,000

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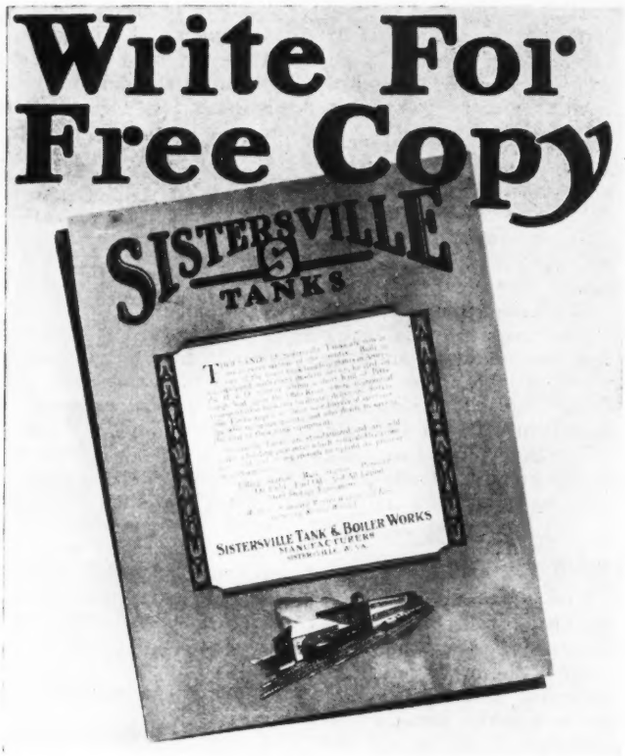

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gallons and combination plants 136,787 gallons.

In 1924 there were 445 oil absorption plants which produced 670,678,000 gallons of gasoline as compared with 639 compression plants producing only 257,894,000 gallons. In that year the charcoal process began to show up in complants, with five other plants using it in mercial operation with 12 complete combination with other processes. The 12 complete plants produced 4,064,000 gallons in the year.

The tendency toward larger plants is seen in the government figures reported above. In 1921 there were 1,056 plants in operation producing an average of 1167 gallons per day while in 1924 there were 1096 plants producing an average of 2356 gallons per day indicating an increase in plant size of over 100 per cent in three years. The increase in production per plant may be attributed partially, also, to better manufacturing methods which have obtained a larger yield from a given quality and quantity of gas.

Graduated Scale of Dues for N.P.M.A. Members

CHICAGO, May 14.—The new schedule of dues for members of the National Petroleum Marketers' Association has been arranged in compliance with an agreement reached at the association's convention here last month. On May 10 the new application cards for N.P.M.A. membership were in effect and the following schedule of graduated annual dues were in force.

Members that operate from one to three bulk or service stations or who do an annual business of not more than $100,000, will pay $25 per annum. Members who operate from four to eight stations or do an annual business of more than $100,000 and not over $250,000, will pay $50 a year. Members who operate from nine to 15 stations or do a business of more than $250,000 and less than $500,000, will pay $75. Members who operate 15 or more stations or who do an annual business in excess of $500,000, will be assessed $100 a year.

In instances where a member's annual volume of business is greater than the classification indicated for the number of stations he operates, the volume of annual business governs the amount of his dues. This method of assessment is intended also to take care of the apportionment of dues paid into the organization by Independent oil men who do not operate any stations at all, such as big lube compounders with only one plant, for instance.

PORT ARTHUR, TEX.—Fred Dodges, superintendent of the Port Arthur plant of The Texas Co., Houston, is in mourning resulting from the death of his mother the middle of April.

Standard Asserts Burton Licensing Has Increased Competition

Staff Special

JEFFERSON CITY, MO., May 14

STANDARD OIL CO. of Indiana on May 10 filed in the Supreme Court of Missouri its answer to an information filed by Attorney General North T. Gentry last Dec. 12 which seeks to have the Standard Oil Co., The Texas Co., White Eagle Oil & Refining Co. and Standard Oil Co. of Kentucky ousted from the state or fined if convicted of violation of the Missouri anti-trust laws, by restraining trade and establishing a monopoly in Missouri since June 28, 1913, by agreements among themselves and with other oil companies.

The Standard denies that, since 1913, it has violated the laws of Missouri. It denies that it has agreed with other companies to restrain trade or his attempted to establish a monopoly.

It asserts that there is no monopoly or restraint of trade in the oil business in any of the states where it operates; that on the contrary while in 1913 it had practically no competition in Missouri it now has more than 900 competitors.

Among these competitors, the company in its answer, are The Texas Co., Sinclair Consolidated Oil Corp., National Refining Co., and other concerns with large financial resources; that these 900 competitors have, since 1913, established 2169 bulk and service stations from which they are today selling petroleum products in competition with the Standard Oil Co. and each other; that while the Standard Oil Co., today is selling more petroleum products in Missouri than it did in 1913, the percentage of its business has decreased, and the percentage of business done by its competitors has increased constantly during that period.

Competition Multiplied

THE answer further states that in the 10 states in which the company does business its competitors have increased the number of their stations from 465 in 1913 to 19,078 in 1925.

It avers that the agreements which the attorney general complains of in no manner restrain trade or limit territory, but were made for the purpose of settling litigation pending and threatened over patented processes based upon the development of the Burton process.

It alleges that the company, through its development, had the right to the sole use of the process but, realizing that if it did not allow others to use it a shortage of motor fuel would result, it decided upon a policy of permitting other refiners to use it on a royalty basis. The answer says the first licenses were limited, but in 1920 Standard changed its policy and allowed all refiners who desired to use the process without limit as to its territory.

By its development of the art of cracking and its policy of permitting other refiners to use its process, the company has made competition possible, and has voluntarily enlarged the trade opportunities of its competitors, instead of reserving all the benefits of its patents to itself. The company states that had it not been for these efforts there would have been a shortage of motor fuel not only in Missouri but in the United States.

It also points out that in 1916 when respondent's patented processes were first being installed by other refiners, the total volume of gasoline refiners in the United States were able to recover from crude petroleum averaged less than 20 per cent; while in 1925 through the development of the cracking process refiners were able to recover an average of approximately 35 per cent; and that in 1924 the total production of crude oil in the United States was 713,940,000 barrels, and that the total possible recovery of gasoline therefrom, without the use of the improved methods, would have been less than 6,000,000,000 gallons while the consumption of motor fuel in that year was almost 8,000,000,000 gallons.

That the total production of crude petroleum in the United States in 1925 was 755,852,000 barrels of 42 gallons, from which by the old methods it would have been possible to recover but 6,350,000,000 gallons while consumption of motor fuel in the United States that year was 9,362,000,000 gallons.

Averted a Shortage

SO, without the use of the patented processes of this company and others there would have been a shortage of motor fuel of almost 2,000,000,000 gallons in 1924 and 3,000,000,000 in 1925, while with the use of such processes there was an actual production in the United States in 1924 of 8,959,682,220 gallons of motor fuel, and in 1925 there was produced 10,886,127,000 gallons. A brief resume of the case follows:

March 9, 1909, the Supreme Court of Missouri rendered a judgment ousting the Standard Oil Co. of Indiana and other oil companies from Missouri on the ground that they had established a monopoly. June 28, 1913, the court made another order suspending its writ of ouster against the Standard and authorizing the company to continue to do business in the state upon the condition that it should faithfully observe the laws of the State of Missouri and especially the anti-trust laws.

In September, 1924, Attorney General Jesse W. Barrett filed a motion to vacate the order suspending the writ of ouster and to oust the company, alleging that it had since June 28, 1913, violated the anti-trust laws of the state. The Standard Oil Co. answered denying such violation. Barrett filed a reply to this answer which was, on Dec. 31, 1924, stricken out by order of the court as not meeting the issues tendered by the answer. The attorney general then moved to strike out the answer of Standard Oil Co. of Indiana which motion the court denied and required theAttorney General to file a second reply. The reply having been filed, E. M. Tipton of Kansas City on May 7, 1925, was appointed commissioner to take testimony in the case. Attorney General Barrett had retired from office and was succeeded by Robert W. Otto who was appointed Judge of the Supreme Court of Missouri on November, 1925, and North T. Gentry was appointed attorney general.

No testimony had been taken in the case and on Dec. 12, 1925, Attorney General Gentry moved the Supreme Court to dismiss the case brought by Barrett. This was done and the cost thereof being subsequently taxed against the state. Thereupon Attorney General Gentry brought a new action in the nature of "quo warranto" alleging that the Standard Oil Co. of Indiana, The Texas Co., the White Eagle Oil & Refining Co. and the Standard Oil Co. of Kentucky had entered into agreements that were in violation of the anti-trust laws of Missouri since June 28, 1913. These companies moved the court to require the attorney general to make the charge more specific. The motion was denied and the defendants were given until May 10, 1926, to answer the information.

Berry's Moves Chicago Office

CHICAGO, May 13.—James B. Berry's Sons Co. has moved its Chicago office from the Standard Oil Co. building at 910 S. Michigan Ave. to the new Strauss building at 310 S. Michigan Ave. The new quarters are closer to the heart of the business district and in what is called by some the finest office building in the city. Other oil companies are housed there.

Starts Oil Advertising Agency

CHICAGO, May 13.—J. L. Stone, until April 1 advertising manager of the W. H. Barber Co., has gone into the agency field, specializing in oil company accounts. Mr. Stone was succeeded by T. Worum of Barber's Minneapolis office.

Rate Complaints in Southeast Are Widened in Scope

Staff Special

WASHINGTON, May 14

AS things seem to be shaping up, units in the oil industry and the railroads, interested in getting Mid-Continent, Texas, Louisiana and Arkansas oil into that part of the country east of the Mississippi and south of the Ohio and Potomac rivers, are preparing to stage a Donnybrook Fair fight.

Allegations, in complaints by the Standard of Kentucky and the Pure Oil companies, that the rates from the south Atlantic and gulf ports into the interior of the southeast are unreasonable and unduly prejudicial to them, probably will be met by amended complaints on the part of the Transcontinental and other companies represented by Willis Crane, Ed. P. Byars, Harry S. Elkins and W. W. Klingensmith that the rates from the southwest to the southeast are also unduly prejudicial. The earliest complaints filed have laid emphasis and practically been confined to allegations that the rates are unreasonable; that is, that they are simply too high and not that they prejudice the complaints and unduly prefer their competitors.

However, inasmuch as the companies that distribute through the ports allege undue prejudice on the part of those rates against them, the earlier complainants feel that they must make a charge of that character against the rates they have attacked. An allegation of that sort requires the freight rate regulating body to compare the rates via the Mississippi crossings with those from the ports into the interior.

An allegation of undue prejudice, frequently, turns out to be a two-edged sword. When it is found that a set of rates is unduly prejudicial, the railroad or railroads maintaining such rates are supposed to have two options: The first is to reduce the rates that have been found unduly prejudicial. The other is to raise the other rates.

It is the understanding that the earliest complainants, for instance, the Transcontinental, desired to avoid a fight on the ground of undue prejudice so as to avoid the possibility of an order requiring the railroads to reduce the rates via the Mississippi crossings or to raise others, the others being the rates from the ports. However, the allegation has been made and the thought is that the earliest complainants must amend in the manner indicated, and let the fight cover the whole map, even if it does result in the raising of rates for some of those in the fight.

Spread of the fight to cover the whole map will result in the elimination of attorneys and traffic managers whose clients are interested in both phases of the subject. For instance, it would not be natural for Fayette B. Dow, representing oil associations both east and west of the Mississippi to get into a fight involving members in each association on opposite sides. Other attorneys and traffic managers have interests which, in such a fight could be brought into conflict and thereby render them ineligible.

Urges Elimination of Q. D. A. Contracts

ENID, OKLA., May 13

Marketing policies throughout Oklahoma have been elaborated upon and changed in many different forms. There seems to be a general discussion throughout the state of the results of the Q.D.A. contracts. Some large jobbing firms have written Q.D.A. contracts which number into the hundreds throughout the state. Smaller jobbing concerns seem to think they are obliged to meet the wholesale conditions brought about by the taking of Q.D.A. contracts by larger firms. As a result they are guessing at the amount of discount certain customers are entitled to.

In fact the smaller jobber is at a disadvantage. He is not in position to wholesale his Q.D.A. contracts or discounts to such an extent as to protect certain companies throughout the state, and therefore he considers it a necessity to make a blanket price or discount to his customer. As a rule this has resulted in practically a 1½ cent to 2 cents discount to a great many customers. This has brought about a condition throughout the state with the purchaser of gasoline, where they are demanding a 2 cents a gallon discount from the jobber that is supplying them.

Although the regular Q.D.A. contract is in effect, and it apparently seems the customer is only getting what he is entitled to by the contract, a great many customers are enjoying more than the Q.D.A. contracts call for, and, as a result, it has jeopardized the oil industry to such an extent that a great many oil industries are suffering or assuming an actual loss on the business they are doing. As a result of all of these conditions, which have been brought about possibly by the first offender not realizing the actual result thereof, or possibly by an oversight or some misleading statements pertaining to actual market conditions it would seem to me that the best way to right a wrong is to act.

No doubt the greater part of jobbers holding these Q.D.A. contracts would be very glad indeed if they were eliminated. Therefore, why not right the wrong before it is too late, as many a legitimate honest jobber has lost by trying to keep up the pace. Let the large jobber eliminate taking Q.D.A. contracts at once and assume or set up a reserve to take care of the Q.D.A. contracts that they feel honestly obliged to deliver or protect and then go back to the old system of marketing goods, which constitutes the cost plus the actual expense for operating plus a legitimate profit on your money invested. If the present tank wagon market in Oklahoma had been based on these facts plus the Q.D.A. contracts then it would be legitimate to eliminate the Q.D.A. contracts and go back to the original honest policy.

It is my honest belief that, if some radical step along this line should be entertained by some of the larger marketers of Oklahoma, we would be able to take care of our business at the peak of the season when it becomes necessary for every jobber to bend every effort to care for his trade. Also, this action in my belief would strengthen the refiners' price. As it is our markets and policies throughout the state are made up of discounts; these discounts jeopardize market principles, and lead the jobber to believe he is obliged to protect his quotations with discounts, and, therefore, his object is to make the refiner or manufacturer stand his portion of it. In this way the tank car price of gasoline today is lower than it should be, due to the fact that the jobber will not pay more than he thinks he should and as long as these discounts are in effect I honestly believe we can expect a lower tank car price as a result.

Many jobbers are adding a ten-day clause to all their Q.D.A. contracts, thinking and hoping that possibly during the month of either August or September a greater portion of the old Q.D.A. contracts will be eliminated, and a general elimination of all contracts will be in line and therefore they will have some protection through their ten-day clause cancellation.

It seems to me that this is all wrong, and if a wrong has been enacted through some error, then we should all be big enough and broad enough to meet these conditions by elimination. I honestly believe that if by some way the elimination or the discontinuation of Q.D.A. contracts from the regular tank wagon price in Oklahoma can be accomplished in the near future, it would be a great saving not only to the larger jobber, but the smaller jobber. Pulling markets on an ethical and legitimate foundation should be the policy of every legitimate jobber. That is what I believe the laws of our state were enacted for. Let's hope that the Q.D.A. Contracts will be a thing of the past in the very near future.

L. A. Warren
Eason Oil Co.
Enid, Okla.

N. P. A. Fire Marshals Told How to Make Wooden Roofed Tanks Gas Tight

CLEVELAND, May 14

THE first bulletin issued by the Association of Fire Marshals of the National Petroleum Association was prepared under the direction of Houston Dunn, managing editor of the association and also of the National Petroleum Mutual Fire Insurance Co. and sent out by R. A. Wotowitch, trustee in charge of the N.P.A. department of welfare and insurance. It deals with wooden roofed and gas tight tanks, and how to make the former gas tight. The complete bulletin follows:

"Fire loss statistics for oil properties show that tank fires are responsible for a greater fire loss to the industry than all other oil property fires put together. Consequently, it is apparent that of all subjects pertaining to fire prevention in oil properties, the matter of preventing tank fires is most important.

"It is a well known fact that lightning is the most frequent cause of oil tank fires, thus it becomes apparent that the first problem to be dealt with is the prevention of tank ignition by lightning.

Wood Roofed Tanks

"THE records indicate that wood roof tanks are particularly susceptible to lightning. The same records indicate that the probability of ignition by lightning decreases as the tanks become more and more gas tight. It is evident that every escaping particle of gas vapor is a fire haard, offering not only the possibilities of ignition by lightning, but also by other causes. A great deal has been said lately about the importance of gas-tighting tanks, but from monetary reasons only. Numerous investigations have been made which have demonstrated beyond any question of doubt that the oil industry is annually losing millions of dollars through evaporation. For this reason alone, a great many oil companies are proceeding with programs which require that all tanks be made gas-tight. In many of the older plants this requires a very considerable expenditure of money because of the nature of the improvement required.

"It is obviously almost a hopeless job to make a wood roof tank gas-tight without going to considerable expense. A great deal can be done, however, by keeping the roof in good repair, by sealing all of the joints in the roof-covering with asphalt and keeping them sealed; also by maintaining the top angle joint as tight as possible through various means of sealing.

Two Classes of Wood Roofs

"WOOD roofed tanks are of two classes—those covered with canvas or composition roofing and those covered with sheet metal. To reduce evaporation losses with first class, the canvas can be impregnated with bituminous roofing material and the canvas strips can be made to extend down around the top angle to the shell of the tank against which the canvas can be held tight by means of a wire cable encircling the tank. It is obvious that a certain amount of play must be allowed at this top angle joint to take care of expansion and contraction, also the top angle joint should be reinforced in such cases, and a filler should be used beneath the canvas to make this joint as gas tight as possible.

"Where wood roofs are covered with sheet metal the respective sheets should be kept well nailed to the underlying wood-decking and all of the joints should be sealed with an asphalt-asbestos composition. All of these iron roofing sheets should be electrically connected together by means of galvanized iron wires stretched across the top of the tank and fastened to each piece of sheet metal on the roof. This can be accomplished by the use of round head screws and washers, the ground wires being thereby held firmly against each sheet.

"All points of contact must first be cleaned with emery cloth and after contact has been made, painted over to prevent corrosion. It is particularly important that these wires be carried down to the shell of the tank to which they may be fastened by a wire cable extending around the tank, this cable being grounded in each case. This electrical interconnection of the roof sheets is particularly important in minimizing the possibility of lightning ignition.

Steel Roofed Tanks

"YOU will appreciate in the foregoing that we are only suggesting these methods for cheaply improving the condition of wood roofed tanks, cutting down both evaporation losses and reducing the fire hazard at the same time. We recognize that the only practical answer so far developed to the gas-tight problem is a steel roof, made of stock heavy enough to be caulked around the top angle (at least 3/16 inch thick).

"It is remarkable how few steel roofed tanks are ignited by lightning. If the tank be gas-tight, if the roof hatches, etc., are closed, a steel roofed tank is practically immune from lightning. We believe fully, that lightning can strike such a tank and not cause ignition. The experience of many oil companies will bear out this opinion. The saving in evaporation loss, particularly on crude or gasoline, will usually pay for this type of construction in a very short time. Where feasible we recommend that every company adopt a program of making all tank roofs for the lighter oils and crude, of gas-tight, all-steel construction.

"While on this subject of gas-tight all-steel construction may we call attention to the fact that an inside top-angle may be caulked easier and better than an outside angle, and so maintained in gas-tight condition.

Fire Inspection of Tanks

"FIRE inspection of tanks should be made once a month on all tanks to ascertain that the hatches, winch box covers, gauging or thief-hole connections are closed and kept closed by plant employes. On such examinations it is likewise important that all vent screens be examined and that corroded or defective vent screens be replaced. Many companies have installed automatic breather valves. These should be thoroughly inspected and kept in good working order. These valves occasionally stick and therefore must be watched carefully as a tank roof may be pulled in if they are not in proper operating condition. Such breather valves are of great aid in preventing evaporaton losses and are recommended, but extra care should be taken in selecting a valve that can readily be inspected and repaired. On gas-tight steel tanks, all hatches and other roof connections should be of gas-tight design so that the full advantages of the improved tank roof construction can be secured.

"On tanks containing sour distillate it may be found necessary to renew vent screens as often as twice a month. Accordingly, for such tanks the vent inspection should be made once a week.

"The utmost precaution in obtaining and maintaining a strictly gas-tight condition of all crude and gasoline tanks cannot be over-emphasized. The results of efforts in this direction will be many times paid in direct dollars and cents saving and the fire hazard of oil tanks will be very greatly reduced thereby."

NEW CASTLE, PA.—Guy F. McCracken, commission agent here for the Sinclair Refining Co., Chicago, recently purchased a 3½ ton Diamond T truck to handle increasing business, according to A. T. Stewart, Jr., district superintendent at Greensburg, Pa. for the Sinclair.

GREENSBURG, PA.—An overhead track system which enables it to double its oil storage with less effort at its bulk plant here has been installed by the Boarts Gasoline & Oil Co.

An automatic air stand for the convenience of its customers has also been installed.

TRIPLEX D

METAL HOSE & TUBING COMPANY

RAYMOND & TILLARY STREETS
BROOKLYN, N.Y.

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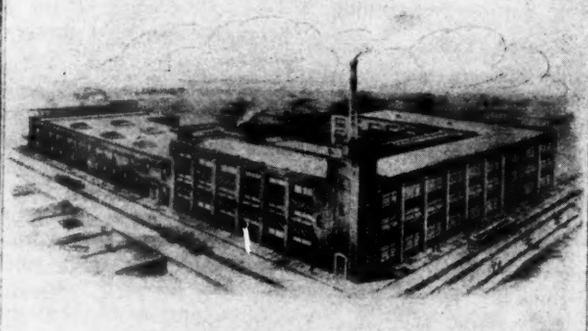

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TRIPLEXD Insurance makes the Metal Hose & Tubing Company responsible for the transportation of gasoline from your pump to your customers' automobiles for 2 full years.

It is not a guarantee of hose construction. It is *insurance* against everything that can happen to your gasoline transportation for 2 full years, except fire and theft.

Actual experience has proved that TRIPLEXD Insurance will save you from 25% to 50% of your average expenditures for gasoline pump hose—even guaranteed hose. For with a TRIPLEXD Insurance Policy—

If anything happens to your transportation within 2 years—*WE* have to worry. *YOU* are *safe.*

If it stands up without any trouble for *more* than 2 years—your insurance costs you just that much *less* per year.

We know the service life of 80% of all TRIPLEXD gasoline transportation units is *more than 3 years!* Many have lasted for 4, 5, and 6 years in active service.

You have four chances that the Policy will cost you *less* than its face value, and *no* chance that it will cost you more. So why gamble on "hose"?

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ENGLAND
LONDON: J. Bazley-White, 3 Love Lane, Eastcheap, E. C. 3

All-Embracing Research Program Advocated by Dr. Thom

CLEVELAND, O., May 15

"TEN years from now, if an adequate program of research be carried out, we may find ourselves posessed of even better and cheaper supplies of motor and household fuel than we now enjoy. On the other hand, 10 years from now, if no such research program be carried out, we may find that supplies have so far diminished and that prices have risen so sharply that the motor car and the oil heater will be passing beyond the reach of the citizen of average means."

Thus did W. T. Thom, Jr., chief geologist of fuels, U. S. Geological Survey, summarize the situation with regard to research in the oil industry in an address before the oil and gas power national conference meeting in Washington, April 22.

The address included brief discussion of the results in exploratory and development work already reached and concluded with a summarization of the "things we specifically need to determine with far greater accuracy":

Subjects for Investigation

"(1) What are the properties and interrelationships of oil and gases as they occur in nature; from what have they been formed; and by what processes have they been formed? By what natural processes are they destroyed, and what recognizable traces do such destructive processes leave? By these we may determine whether certain lands are definitely barren of oil, or whether they may possibly contain oil, and hence be worthy of further geological exploration.

"(2) How far may oil migrate during the geological processes of accumulation; what factors cause migration; what changes does migration produce in oils; and what factors not yet understood contribute to the local concentration of migrating oil and gas into valuable "pools"? If we can determine these facts and factors, the drilling of many dry holes can be avoided and new oil fields can undoubtedly be found.

"(3) What geophysical guides, based upon factors such as gravity, conductivity, and earth temperatures, can be developed to suggest the presence of hidden conditions favorable to the occurence of oil, and what will be the limitations of each method devised?

"(4) Does oil occur only in anticlines formed during specific periods of folding within given regions, or may oil occur in any of these anticlines? And can geologic theory be so perfected as to afford a helpful guide to the exploration of areas where surface rocks afford no significant outcrops and where drilling has not yet been done?

"(5) What are the relations between the amount of pore space present in oil sands; the size of the pores; the kind of oil and gas present; the kind of minerals composing the sand; and the temperatures and pressures existing in the sand; and what do these relations signify in terms of the best pacing and operation of wells for the extraction of the oil?

"(6) What are the relations, chemical and physical, between oil and oil field waters, how may their relations be best controlled, and under what conditions is the water an aid rather than a handicap to oil recovery?

"(7) What are the fossil organic substances which yield oil when distilled or treated with solvent, and what kinds of products does each process yield? Do decompositions take place in one step, or in several? Can they be accelerated or modified in an important way by catalysis? And as a final conclusion, what methods and what mineral raw materials (coal, oil shale, asphalt, natural gas, etc.) can best be used for making substitutes for oil.

Elaborate Structure Needed

"AS I picture it, we are trying to create, not a simple building such as has in the past been adequate for petroleum research, but a skyscraper structure, built upon a foundation of geology, supported by a steel skeleton of technology, and rising by successive tiers of stories through research stages corresponding to exploration, production, transportation, and refining.

"The National Research Council may well serve as the firm of supervising architects to plan and direct the construction of this building, governmental agencies such as the Geological Survey and the Bureau of Mines may serve, respectively, as the masonry of the foundation and as the part of the steel frame below the level of the sidewalk (and hence below the field of direct commercial activity), and the newly endowed research organization of the American Petroleum Institute may afford the framework for the structure within the commercial field, its activities being rounded out by those of the American Association of Petroleum Geologists, by the universities, by the American Chemical Society, and by the several engineering, physical and geophysical societies and organizations interested in petroleum researches.

It is obvious that such a structure can not be erected without painstaking planning, without careful supervision, and without the most accurate fitting of the framework to the foundation and of the walls and floors to the framework. Its cost in both time and money will be considerable, but will be infinitesimal when compared with savings it will accomplish both in terms of dollars, and in terms of a limited and precious mineral resource. Its maximum cost can be but a tiny fraction of a cent per gallon of gasoline, and if profits to the oil industry and the enjoyment of automobiles and oil heaters by the public are worth insuring, such a program of petroleum research presents both an excellent and exceedingly cheap insurance policy."

Humble Buying Crude In Laredo District

HOUSTON, May 13.—Humble Oil & Refining Co., in keeping with its policy of providing purchasing facilities throughout the Texas territory, is now entering the Laredo district as a crude oil buyer.

A combination 6-inch and 4-inch pipe line is being constructed for a distance of 24 miles from the Randado and Henne-Winch-Faris pools in the Jim Hogg county development area to the station of Bruni, on the Texas-Mexican railroad, where steel storage facilities are being provided.

The Humble has also purchased from the Southern Pacific interests their oil gathering lines in the Schott, Mirando Valley, Mid-Ojuelas and Henne-Winch-Faris pools, about 20 miles in length, together with about 90,000 barrels of stored oil.

Two steel storage tanks of 55,000 barrels capacity each are being constructed by the Humble at Bruni, where they will constitute the first units of tank farm construction.

Eventually, the Humble may build a pipe line from the Laredo district tank farm at Bruni northeasterly through Duval, Jim Wells and Nueces counties to Ingleside, on Corpus Christi bay, passing the Piedras Pintas salt dome where the Humble has one east flank deep producing well.

Pending decision about pipe line construction to Corpus Christi Bay the Humble will either load out crude in tank car shipments from Bruni or it will build up storage stocks against the time when line construction is considered feasible.

The entry of the Humble into the Laredo district as a purchaser brings the oil outlet of that territory mainly into the hands of three companies, itself, the Magnolia Petroleum Co., and the Crown Central Oil Corp.

The Magnolia recently took over the producing properties of the O. W. Killam interests, which with its previously controlled production gave the Magnolia fully 40 per cent of the roundly 6500 barrels daily production in the Laredo district.

Crown Central, which operates a lubricant plant on the Houston ship channel, handles its own Laredo district production and some purchased oil through gathering lines in the territory.

The Humble makes the third interest to enter the region as a factor in purchasing.

Money in Car Washing

1 Hand washing is slow drudgery. Costs eat your profits.

2 Solid water thrown with fire-hose force blasts the dirt off *and the finish with it!*

3 Air and water imperfectly mixed produce slugs or "bullets" of water that are ruinous to the finish.

4 Air and water set by the exclusive CURTIS "AIR-MIST" method *stays* mixed, and reaches the car penetrating but harmless.

IF—you can wash cars quickly, thoroughly, at low cost, and without injury to the finish—and that's what you can do when you own a CURTIS "AIR MIST."

There's real money in car washing when it's done right. That means keeping *costs* down, turning out more completed cars per day, with less *labor* and less *floor space*; and at the same time, producing a result so highly satisfactory to the customer that he will advertise your wonderful service to his friends!

All this is made possible by the CURTIS "AIR-MIST" System (with water amplifier) as by no other method. As the pictures show, there is a definite and serious objection to all systems that have preceded this perfected "AIR-MIST" System. Only the CURTIS "AIR-MIST" overcomes all previous difficulties—both as to preservation of the car's finish, and as to the time and labor involved in the job. All previous car washing systems, indeed, have been merely leading up to the "AIR-MIST."

If you would like to turn car washing from a long, expensive job into a rapid and profitable one, send for the "AIR-MIST" catalog. Send the coupon and let us put the facts in your hands.

CURTIS PNEUMATIC MACHINERY CO.
1901 Kienlen Avenue • • • St. Louis, Missouri

Curtis Style "V" Compressors for tire inflation lines.

Curtis Column Type Air and Water Stands.

The "AIR-MIST" is made by the manufacturers of the famous Curtis Compressors for tire inflation lines, practically a standard in garages and filling stations.

CURTIS "AIR-MIST" IMPROVED CAR-WASH SYSTEM

with water amplifier

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I want to make my car washing profitable. Please send me, without obligation, your new free AIR-MIST catalog.

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Beer Pump Was Forerunner of Present Natural Gas Testing Method

Staff Special
TULSA, May 15

TWO or three years ago Ed Hanlon and T. K. Smith proposed to buy a gasoline plant down in Texas which had not been operated successfully by its owners. Their plan was to make a partial payment, borrow money for the remainder and have plant income pay off the debt after the plant was overhauled and put on a paying basis.

Bankers to whom Mr. Hanlon applied for the loan began asking questions about the business relationship of the two men. He asked first how long they had known each other. The answer was, "20 years." He asked how long they had done business together and the answer still was, "20 years." The banker then said that that was plenty of recommendation for him. If two men could stay in business together for 20 years he would be willing to take the chance they would stay together.

As a matter of fact the two men have made their home together almost as long as they have been associated in business. When both lived in Sistersville, W. Va., before Mr. Smith was married, he lived with Mr. Hanlon. For the past 10 years, since Mr. Hanlon has been in the west, he has made his home with Mr. Smith. Mr. Hanlon is still a bachelor.

Although Ed Hanlon is a little younger than T. K. Smith he has been in the oil business a little longer. With his partner, James Henaghan, he has been an oil producer since 1900 and a natural gasoline manufacturer since 1908. It was about 1910 that Mr. Smith entered the gasoline business.

N. P. N. Staff Photo.

T. K. Smith and Ed Hanlon
They have been friends for 20 years, business associates for the same length of time and although one is a bachelor they have lived together for 20 years.

Beginning of Friendship

THE friendship of Hanlon and Smith started back in 1902 or 1903 when T. K. Smith came to Sistersville to enter the plumbing business and Hanlon was keeping books there, among his other duties. Mr. Smith arrived in town with a capital of $200 and the owner of the vacant building he wanted to rent demanded $150 or three months rent in advance.

That put such a crimp in the Smith capital that he confided in the bookkeeper, Ed Hanlon, that he didn't exactly see how he was going to make the grade. Mr. Hanlon gave back the $150 and the business relationship of the two as well as their warm friendship dated from that day.

Along in 1908 one of Mr. Hanlon's friends told him he ought to build one of these new gasoline plants on one of his properties. He described the plants as being very simple, so simple that they might be built largely out of lease equipment. The next day Mr. Hanlon walked by one of the little plants and saw that it was actually making gasoline and decided to try it himself.

He got ahold of a small Gardner compressor, hooked it onto a gas engine on the lease, screwed some pipe together and dropped it into Middle Island creek for a cooling coil. A few odd tanks around the lease served as storage and accumulator tanks. The plant was on the Kernen farm about seven miles from Sistersville and originally cost about $300 as it was first tried out.

Six Drums Per Day

WHEN the plant was set to running it began making about 300 gallons per day. In those days that was 6 drums of gasoline and a good bit to get rid of. Ed Hanlon peddled it around and sold it to filling stations at 20 to 25 cents per gallon in 25 gallon lots and upwards.

In those days the only test applied to gasoline was that of its gravity. The standard gravity for motor fuel was 76 degrees Be. It was gravity, and plenty of it, that Mr. Hanlon supplied from his drums.

At first the market was rather good for small lots but finally there got to be so many small plants making gasoline that it couldn't be given away. Then the Atlantic Refining Co. and the Camden works of the Standard Oil Co. began buying the stuff in rather large quantities and business was better again.

One evening along in 1909 or 1910 Ed Hanlon was standing with Art Doyle, general manager of the Jarecki Supply Co., in front of the hotel at Sistersville. T. K. Smith came across the street with a disgusted look on his face and announced that the plumbing business was getting dull. Many of the operators had drifted on into the western fields and calls for his services and materials were not frequent enough.

Mr. Hanlon advised him to quit the plumbing business and get in the natural gasoline business. "All right," Mr. Smith replied. "How do I get in?"

"Go West, Young Man"

THE advice was to go out west to Oklahoma, get a bunch of gas contracts and then try to get a plant going.

The next few weeks Mr. Smith spent around gasoline plants near Sistersville learning about gas and gasoline. He objected strenuously to carrying the heavy absorption gas testers which Ed Hanlon strapped on his back when he went out in the field to test gas. These heavy cylinders of oil weighed about 100 pounds or more and made a real man-sized load. When gasoline first started to be made the gas tester strapped to Mr. Hanlon's back made him the object of a good deal of laughter, besides being heavy.

Mr. Smith decided to build a gas tester on the principle of the plant which he expected to build. So he got

a two cylinder beer pump with a long handle to build up pressure as well as take in gas. Then he cut down a water boiler from his shop for a gas holder.

To get a cooling action on his coils Mr. Smith hooked up a pressure bottle of carbonic acid gas from a soda fountain and expanded the gas over the coils. The consumption of carbonic acid gas was terrific.

Beer Pump Tester

THIS beer pump tester was tried out along with the absorber tester and compared with plant results around Sistersville and found to be quite accurate. The gas holder was calibrated for various pressures so that it was possible to check the quantity of gas accurately.

Armed with the beer pump Mr. Smith came to Oklahoma in 1910 and started his career as a manufacturer of natural gasoline. A little later he rigged up a small compressor on the rear end of an automobile and ran it with a belt over the rear wheel of the car. This was the forerunner of the present standard physical testing equipment used throughout the field. Some of the older testing cars still have the rear wheel belted to the compressor while the newer ones have an auxiliary drive shaft direct connected with the motor.

The first plant bought was on the Cowbrey farm in Glenn Pool. Later gas contracts were obtained from the Prairie and other plants were built.

Burned Gasoline

THE same lack of a market for natural gasoline appeared in the west to dismay the pioneer manufacturers. All available tankage often was full. The operators were under contract to take gas and make gasoline so it had to be made whether it could be sold or not.

One way to dispose of the stuff was to store it in open top wood lease tanks. But it wouldn't evaporate fast enough in these. Finally an earthen pit was dug. Each morning the production was run into the open pit. Standing well back a match was thrown in and the excess went up quickly and efficiently. This was back in 1914. Apparently it is always darkest just before dawn, as the saying goes, because suddenly the Standard Oil Co. of Indiana began buying gasoline and the price jumped up to 5 cents per gallon almost overnight.

Having developed their extensive natural gasoline interests by years of hard work both Ed Hanlon and T. K. Smith are giving more time to recreation now. Mr. Smith has become quite an ardent hunter. With a group of other Tulsa men he has a game preserve near Enid where he spends quite a bit of time. Mr. Hanlon has never cared for hunting but has been bitten by the golf bug.

One might think that Ed Hanlon is an old timer with long grey beard and stooped shoulders from the statement a little earlier that he has been in business as a producer and manufacturer for a little over a quarter of a century. The accompanying photograph of the two friends and business associates will counteract that impression. As a matter of fact Ed was out working when most youngsters of the present day are in high school or before they have even gotten that far.

A recital of the holdings of the Chestnut & Smith Corp. and the various Hanlon interests would not be particularly interesting. It should suffice to say that the Chestnut & Smith Corp. is the second largest manufacturer of natural gasoline in the world. That one of the Hanlon Gasoline Co.'s plants handles more gas than any other plant in the world and that Henaghan & Hanlon have 20 gasoline plants in eastern fields in addition to their oil production.

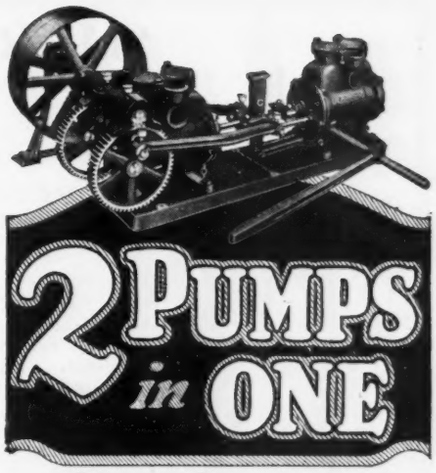
New Texaco Gasoline Is 60-62 With 390 End

CHICAGO, May 14.—The erstwhile mystery of The Texas Co's. new gasoline has been made public. The character of Texaco gasoline has been changed in all western divisions where the company markets. The new product is heralded to the public as a "new and better gasoline" marketed at the same price as the old. And no change has been made in the company's policy with reference to quantity discount prices. The new product has the following specifications:

Gravity	60-62° A.P.I.
Initial boiling point	89° F.
20 per cent off at	187° F.
50 per cent	260° F.
90 per cent	355° F.
End point	390° F.

The new motor fuel is announced as a product of the Holmes-Manley cracking process. Its introduction is one of the first important public acts of the new president of The Texas Co., R. C. Holmes. It is said unofficially that Mr. Holmes has long been an advocate of marketing a product under the Texaco name that would be different from all competitive grades of gasoline, of higher specification and at the same price. The company has abandoned the sale of its former U. S. Motor specification gasoline.

Considerable publicity accompanied the introduction of the new Texaco gasoline in Chicago. All Texas Co. trucks carried banners; all service stations were decorated with signs, every pump carried a pennant; big advertisements were displayed in windows; pamphlets were distributed to the public; advertisements were published in newspapers, and it was announced that five Farm Journals of National Distribution and three of the Nation's biggest Story Magazines would carry "ads" also. The substance of all this



-One Gasoline
-One Kerosene

Both are mounted on a one-piece cast iron base with power jack attached. Easy to install. Will operate without vibration or movement on any kind of foundation.

Either pump may be connected to the cross-head by two machine bolts and operated separately or together.

Cast iron base under pumps forms oil pan which is tapped for drain pipe, insuring a safer and cleaner pump house.

Plunger, slow speed, and packed with special cup leathers—a special safety feature.

DEMPSTER
Oil Pumps

Simple in construction, easily installed and easily kept in continuous service by the average operator. Designed for the continuous pumping of kerosene, distillate and gasoline. Made for hand power, engine power, or electric power; belt or gear drive.

Write for Special Oil Pump and Oil Supplies Catalogs

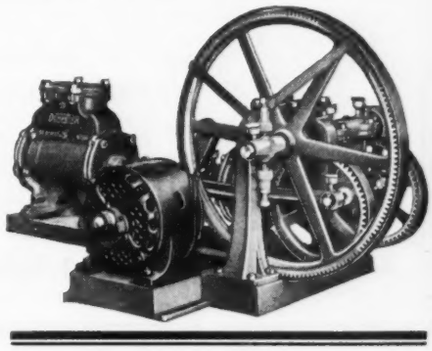
Dempster Mill Mfg. Co.

Main Offices and Factory
726 S. Sixth St., Beatrice, Nebr.

Branches: Oklahoma City, Okla.
Denver, Colo. Kansas City. Mo.
Omaha, Nebr. Sioux Falls, S. D.
Amarillo, Texas

Distributors: Sharpsville Boiler Works Co. Sharpsville, Pa.

Builders of satisfactory pumps and pumping equipment for over 40 years.



"MARS" YARD PUMP

For Rural Trade

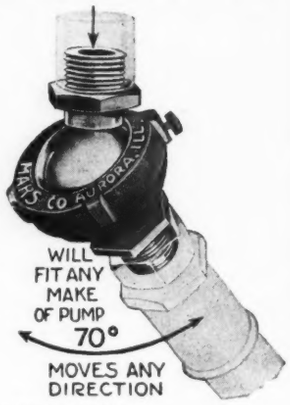
Substantial and permanent equipment. Placed on driveway or some convenient place in yard.

OIL JOBBERS **catering to rural trade—to get and hold customers will be vitally interested in the "MARS" Yard Pump.**

Free booklets illustrating and describing in detail the "MARS" Yard Pump for your distribution. Order sample today. If Pump and price is not satisfactory return at our expense. (Packed one or four in crate.)

MARS Swive Joint. A fitting—a joint up next to the pump—protects hose from breaking at this point, but this joint must move up, down, or sideway.

MARS is the best on the market. One company places order for seventeen hundred (1700.) A big saving, and all operators want them. Place order today.



Write for full information

MARS COMPANY

Aurora, Ill.

"ST. LOUIS" *Steel Barrels*

"ST. LOUIS" SERVICE

"ST. LOUIS" QUALITY

Two vital facts to consider when placing future business

ST. LOUIS STEEL PACKAGE CO.

Natural Bridge and Goodfellow

St. Louis, U.S.A.

publicity was; "The New and Better Texaco Gasoline is Here."

Circulars distributed generally to the re-sale trade assert that the product possesses all of the virtues of the numerous special qualities of gasoline sold in different parts of the country, high-test for ease of starting, benzol blends to reduce knocking, and commercial gasoline for maximum power. However, the booklet states on the first page:

"The new product is not a mixture with benzol or with any other product or chemicals. It contains no dopes or poisons. It is pure, unadulterated gasoline produced from selected crude oil."

Among the claims made for the new motor fuel, it is asserted that it will give the consumer a quicker start, a quicker pick-up, more miles per gallon, relief from carbon knocks and better lubrication. The Texas Co. had the spotlight of the industry squarely upon it today and a great many gallons of the new product were sold to competitive oil men.

The gasoline was available at some points in Chicago for several days before it was advertised because the company's distributing tanks had to be cleared of the former Texaco and to be stocked with the new. It is understood the grade will be introduced in eastern territories soon.

Los Angeles Again Has Gasoline Bootlegger

LOS ANGELES, May 13.—The gasoline bootlegger is again making his presence felt in and about Los Angeles. The recent break from the strong position natural gasoline held here has given the bootlegger a sort of new inning. During the last few months casinghead was scarce and almost impossible to buy in the open market. Virtually all of it was being absorbed by the big companies and the bootlegger was forced to seek other material from which to manufacture his motor fuel.

As the big companies began to let up in buying casinghead with the approach of warmer weather larger volumes of this blending material became available. Also considerable effort was made by Oklahoma casinghead producers to ship into this region. This action forced price reductions and served further to favor the operations of the bootlegger.

Bootleg gasoline is being sold, delivered at service stations in Los Angeles, at 5½ cents under the Standard Oil retail price. The Standard's differential at the service station is 4 cents, so the bootlegger is actually selling at 1½ cents off.

This situation is not true of the entire Pacific slope but is confined entirely to Los Angeles and vicinity. The prospect for the future is rather encouraging as price advances in the east are tending to favor the Oklahoma casinghead people to sell in their own territory and to eliminate their product from the casinghead market here.

Industrial Notes

Butler Mfg. Co., Kansas City, Mo., has appointed L. E. Tripp as its representative in eastern Oklahoma, succeeding J. N. Williams who has resigned.

The new Tulsa office of the company is located in the Mayo Bldg.

* * *

John W. Tryon, manager of the Port Arthur, Tex. plant of the Gulf Refining Co., Pittsburgh, Pa,, recently entertained the El Minta shrine and band.

* * *

W. W. Mills, formerly with the Atlantic Refining Co., is now with the Colonial Filling Stations, and succeeded Mr. Thatcher as manager at Brockton.

* * *

F. W. Thatcher, manager at Brockton, Mass. of the Colonial Filling Stations, Inc., has been promoted to general supervisor of filling stations in New England.

Industrial Catalogues

Champion Pneumatic Machinery Co., 8164 South Chicago Ave., Chicago.— Bulletin AW-9 is devoted to illustrations and descriptions of the Champion self-oiling auto washer adapted for installation at filling stations. Better work in less time, is the way the company describes the merits of this machine. It is claimed that the machine can completely wash and polish a car in from 15 to 20 minutes.

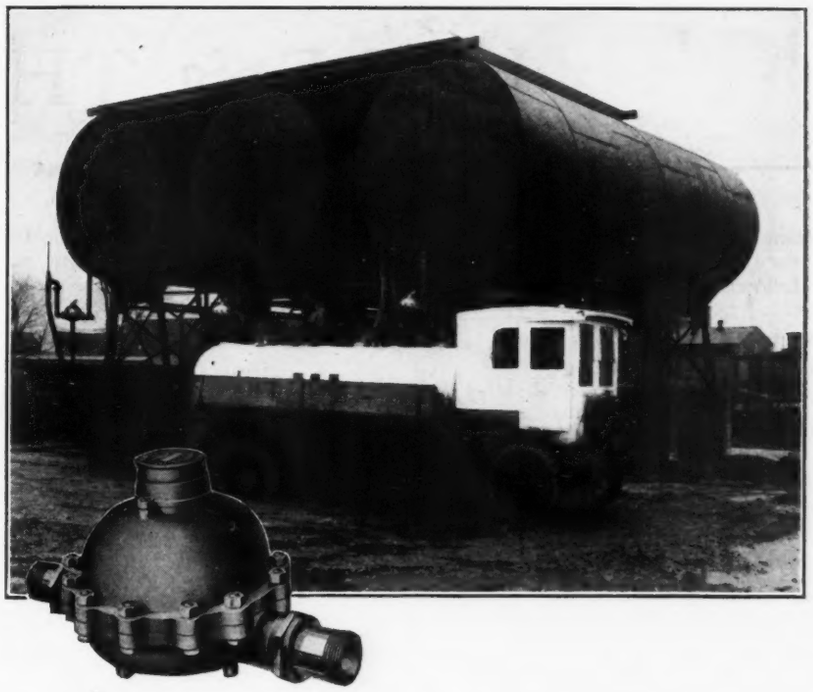
Specifications and salient features of construction, as well as prices, are given in the bulletin.

* * *

Ross Heater & Mfg. Co., Inc., Buffalo, N. Y.—Circular No. 132 on the Ross heat exchanger for oil refineries for the exchange of heat from one liquid to another, or from a liquid to a gas or vapor and between gases or vapors, has been published. The heat exchanger is especially adaptable in the recovery of gasoline from natural or other gases, the company states and is used in several leading refineries.

* * *

W-K-M Co., Inc., Houston, Tex.— This manufacturer of oil field specialties has off the press a folder on its new portable hydraulic pipe straightening and bending machine. It will straighten 8 inch pipe or less, and Kelly joints, and can be easily moved about. It can develop a pressure of 30,000 pounds and is equipped with a plunger pump handle which a 150-pound man can operate. Price is $350.



Accurate, rapid metering for the gasoline wholesaler

To look thru the records of Niagara Oil Meter purchasers is like taking a roll-call of the best known companies in the oil industry. *They're nearly all there!* There are hundreds of up-to-date firms who know the money-saving advantages of Niagara Meters.

Accurate measuring of large quantities of gasoline is just as necessary as giving fair measure to a retail customer. Niagara Oil Meters have never been excelled as a simple automatic means of measuring any petroleum product. A trial will convince you.

Be sure to send for the catalog

BUFFALO METER CO.

Established 1892

2889 Main St. **Buffalo, N. Y.**

Help Your Salesmen

to acquire a working technical knowledge of the selection, application and use of lubricants, by ordering for each one a copy of the PRACTICE OF LUBRICATION by T. C. Thomsen.

It discusses the origin, nature and testing of lubricants and every phase of lubrication engineering.

It is $6 a copy. Make your check payable to—

National Petroleum News

825 Caxton Building **Cleveland, Ohio**

HERE & THERE

National Petroleum News

Home office appointments of the Standard Oil Co. of California include the following in the producing department:

M. E. Lombardi, formerly vice president of the Pacific Oil Co., to be assistant general manager;

Earl G. Gaylord, formerly chief geologist of the Pacific Oil Co., to be chief petroleum engineer;

Wallace Canfield, assistant to the general manager, and H. R. Longaker, manager of the supply division.

Mr. Canfield also was formerly with the Pacific Oil Co., which was recently merged with the Standard.

Earle Derby, formerly with the Pacific, is now with the Standard, his duties including deliveries of oil to the Southern Pacific railroad in addition to the handling of all fuel oil and crude oil exchanges.

* * *

"Pete" Martin, district foreman at Wewoka, Okla., for the Oklahoma Pipe Line Co., Muskogee, Okla., is building a station for the company at Seminole, Okla., to handle flush production north of that point.

A. E. Erickson, district foreman, Muskogee, is at present employed in taking up the company's No. 2 line which was laid in 1915, which will be repaired and covered with paint and paper. The No. 1 line which was laid in 1909 will be treated in the same manner.

* * *

Clyde Wilson, formerly of Peck & Wilson, Iola, Kan., has sold his interest in the Derby station and is now looking up oil leases in the Panhandle of Texas. His successors in the company are W. W. Peck, A. Ray Enfield, Carroll Hoyt and John J. Ford. The new company is operating as W. W. Peck & Co.

* * *

R. R. Trecheville, division manager for the Roxana Petroleum Corp., St. Louis, has been spending a few days at Minneapolis visiting the Jennison-Rollins Oil Co., Inc., which distributes Shell products in Minneapolis and vicinity.

* * *

Chester Naramore, who has been conducting exploration work in Angola, Portuguese West Africa for the Sinclair Consolidated Oil Co., New York, for the past two years, returned to New York on April 26.

* * *

V. A. Combs, president of the Union Oil & Finance Co., Minneapolis, was in Chicago recently on business.

M. L. Johnson, treasurer of the Union Oil & Finance Co., Minneapolis, sailed on April 29 from New York for a 60-day vacation trip to Sweden.

* * *

H. A. Schmitt

who was re-elected vice president and treasurer of the North Dakota Petroleum Association at its annual meeting in February. Mr. Schmitt operates the Red Trail Oil Co., Mandan, N. D.

H. E. Brondli, general manager and vice president of the Carson Petroleum Co., Chicago, accompanied by Mrs. Brondli, sailed for Europe on the S. S. Majestic on April 6 and will be gone 90 days.

Mr. Brondli will visit the foreign connections of his company. Charles Ephgrave is in charge of the Chicago office in Mr. Brondli's absence.

* * *

J. V. Zartman, formerly of the Campbell-Zartman Oil Co., Indianapolis, and lately lubrication sales manager at Indianapolis for the Indian Refining Co., Lawrenceville, Ill., has left the latter company.

* * *

Matt A. Stein, auditor for the West-land Oil Corp., Tulsa, passed through Crosby, N. D., recently, checking up the stations and attending to other company business, according to B. E. Brancht, Crosby.

J. S. Freeman, assistant to the vice-president in charge of production for the Skelly Oil Co., Tulsa, recently returned from a tour of inspection of the company's properties in southern Oklahoma, Texas and New Mexico.

Mr. Freeman spent a day in Upton county, Tex., and two days in Rea county, N. M., where the company has holdings. From there, he went to the Panhandle district.

Mr. Freeman was accompanied on the trip by O. M. (Ted) Evans, general superintendent in charge of operations in Texas and southern Oklahoma. Both men are well known in Mid-Continent oil circles.

* * *

Recent changes in the sales depart-ments of The Derby Oil Co., Wichita, Kans., due to its disposing of its retail marketing division to the Marland Refining Co., Ponca City, Okla., include:

Robert Cunningham, formerly manager of the western division, station department, who is now assistant sales manager of the wholesale department;

N. L. LeBlond, formerly in charge of stations for the company at Kansas City, who will now be in charge of tank car sales at that city, in the Dwight Bldg.

C. A. Keller remains as sales manager at Wichita.

* * *

A. J. Smith, with the Calumet Refin-ing Co., Chicago, has just returned to Chicago from a trip through Michigan. He reports weather and business conditions improved and lube oil business among the jobbers good.

* * *

Jere Kimmel, of the Kimmel Oil Co., Hiawatha, Kan., who has been spending the past year in Florida, reports that many service stations are being built there. He will return to his home in June.

* * *

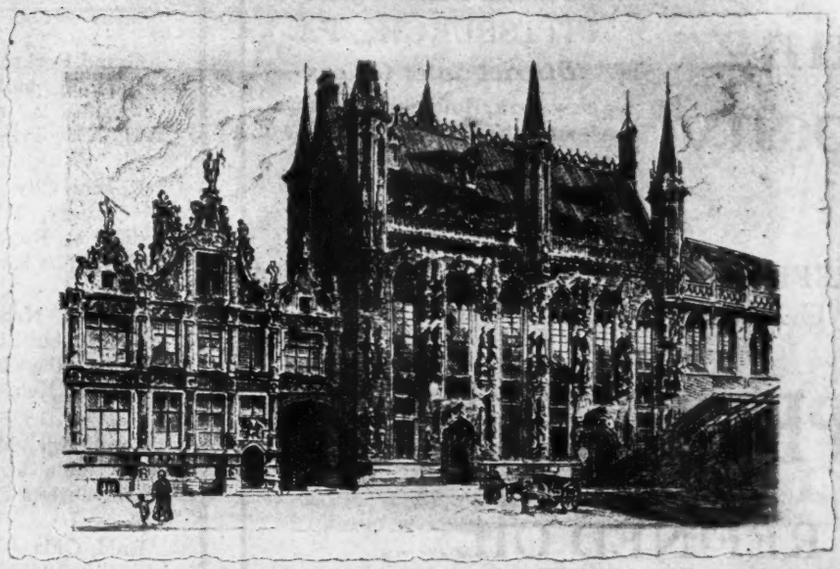
G. L. Bodie, of the Bodie-Hoover Pe-troleum Corp., Chicago, is making a two weeks' trip through Wisconsin territory, but reports that this is a strictly business trip and no fishing.

* * *

I. B. Countryman, with The Texas Co. in the Minneapolis district, has recently been appointed representative at Des Moines, Ia.

* * *

Harry L. Robinson is now with the Calumet Refining Co., Chicago, calling on jobbing trade in northern Illinois and Wisconsin with a line of lubricating oils.



True Proportion—

THE town hall of Bruges is an eloquent example of true proportion. Ever since it was built in the fourteenth century by the proud free burghers, it has been considered a marvelous example of design.

Not only are the main lines of the building in harmony, but also the details—the statues, carving, ironwork, and leaded glass—have their true amount of importance. This proportion of details to the whole is the most difficult problem of all.

Similarly the modern business organization must have its main lines—its policies—emphasized and developed by its details—efficient departments, a loyal personnel, and service to each and every customer. This true proportion is the aim of the James B. Berry's Sons Company.

JAMES B. BERRY'S SONS COMPANY

PETROLEUM PRODUCTS

Oil City, Pa. Chicago New York Boston
Philadelphia Tulsa London, Eng. Hamburg, Germany Paris, France

GULF Refining Company

General Sales Offices
PITTSBURGH, PA.
District Sales Offices
New York, Houston, Atlanta, Boston, New Orleans, Tampa, Philadelphia

REFINERS OF OKLAHOMA TEXAS AND LOUISIANA

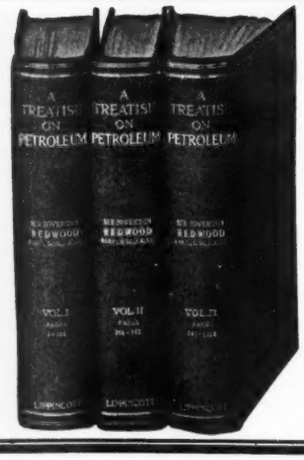
PETROLEUM

REFINED OIL
GASOLINE
NAPHTHA
GAS OILS
PARAFFINE WAX
ASPHALT

Fuel Oil--Lubricating Oils

CYLINDER ENGINE
CORDAGE

RED AND PALE PARAFFINE OILS



Information on all branches of the petroleum industry is to be found in the 4th edition of A TREATISE ON PETROLEUM by Sir Boverton Redwood.

To obtain this valuable set make your check for $39 payable to

NATIONAL PETROLEUM NEWS
811 Caxton Bldg. Cleveland, Ohio

New Oil Station Construction

Grand Forks, N. D.—A. G. Sorlie Co. is building bulk and filling station at Gilby, N. D., according to Arnold T. Berg, Vice President.

* * *

Rogers City, Mich.—John H. Perry, of Onaway, Mich., is building service station at Rogers City. Sinclair Products will be handled.

* * *

Gordon, Neb.—Two filling stations are being built here, one by W. Berkbe, and the other by The Hewett Oil Co., Rushville, Neb.

* * *

Cambridge, Mass.—Service Station is being built for American Oil Co. of Massachusetts at Boston.

* * *

Enid, Okla.—Weldon Oil Co. is building filling station at Byron and Amorita, Okla. Headquarters are at Enid.

* * *

Greensboro, N. C.—L. H. Martin, Inc. is building filling station and opened bids for another station on May 8.

* * *

North Wilkesboro, N. C.—Floyd C. Forester is building four-way drive in service station here.

* * *

Moorhead, Minn.—Super Oil Co. is building filling station here.

* * *

Dickinson, N. D.—Economy Oil Co. to build filling station.

* * *

Gordon, Neb.—Walter Birkby leased site for filling station.

* * *

Chillicothe, O.—O'Donnell Oil Co. will build filling station.

* * *

McKinney, Tex.—R. A. Joplin will erect filling station.

* * *

Bloomfield, La.—Bloomfield Motor Co. to erect filling station.

* * *

Knoxville, Tenn.—Gulf Refining Co. building filling station.

* * *

Fillmore, Calif.—Howard Lawton building filling station.

* * *

Conway, Ark.—Continental Oil Co. erecting filling station.

* * *

Eau Claire, Wisc.—Standard Oil Co. of Indiana to erect distributing plant.

* * *

West Union, Ia.—W. A. Stranahan plans to build filling station.

* * *

Saxon, Wis.—O. A. and James Norton building filling station.

* * *

Plattsmouth, Neb.—George Trunkenbloz, of Eagle, Neb., who operates fill-

ing stations at Nehawka and Murdock, has purchased property here for filling station.

* * *

Youngstown, O.—Service station to be known as the Golden Gasoline Station is being built here.

* * *

Portsmouth, O.—W. R. Shumate and Ora H. Blair completing filling station. Indian Refining Co. is also completing its service station here.

* * *

Imperial, Neb.—White Eagle Oil & Refining Co., Kansas City, Mo., building service station here, to be equipped with two grease pits.

* * *

Beaumont, Tex.—J. P. Reese, Alamo St. and Liberty Ave., building filling station and garage.

* * *

Little Rock, Ark.—Fred Parrott to build filling station at Capitol Ave. and Broadway.

* * *

Albany, N.Y.—Standard Oil Co. of New York purchased property for filling station.

* * *

Oskaloosa, Ia.—Garrett Oil Co. purchased property for filling station.

* * *

Elcho, Wis.—Service station of George Handeyside is being completed here.

* * *

Adelphia, O.—Merrill Armstrong is completing service station.

* * *

Prescott, Wis.—Theis Oil Co., of Pepin, Wis., building filling station here.

* * *

Larimore, N. D.—Cities Service Oil Co. to build filling station.

* * *

Langdon, N. D.—T. B. Hankey and Frank Warring to erect service station.

* * *

St. Peter, Minn.—Allen Davis building filling station at Broadway and Front Sts.

* * *

Onawa, Ia.—L. C. Albright and E. P. Myrland building filling station.

* * *

Glenwood, Minn.—Joe Achter building filling station.

* * *

Fertile, Minn.—Highland Motor Co. completing filling station.

* * *

Brookings, S. D.—Community Oil Co. building filling station.

* * *

Fremont, O.—Lane Shaw to build filling station.

* * *

Eskridge, Kan.—A. B. Haubold is erecting filling station.

* * *

Erie, Kan.—Paul M. Cory building filling station.

* * *

Carroll, Neb.—Dan Thomas purchased property for filling station.

Tradin'
Sight Unseen

SCHOOL boys may trade rusty knives and bits of broken bric-a-brac sight unseen, but in serious business keen minded buyers play no such odds. They prefer to see what they buy.

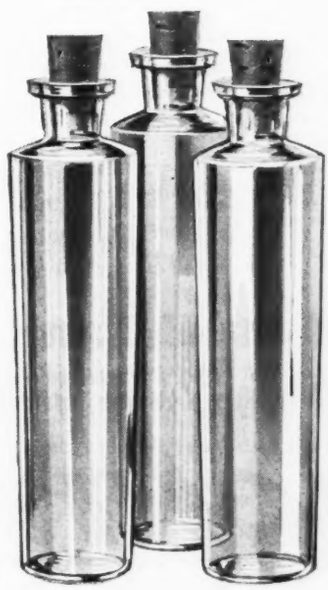
Within the walls of our Sample Oil Bottles your oil asks no odds—it is revealed in all its perfection to the buyer's eyes—creating confidence in its rightness and permitting a ready and thorough inspection.

Our Sample Oil Bottles are made in 2, 4 and 8 oz. sizes and are furnished with either plain or ground and polished bottoms. Permit us to submit samples of these bottles for your consideration.

Illinois Glass Company

Established 1873

ALTON ILLINOIS



Why Hackney Steel Barrels Can be Handled Faster

ONE man can roll and upend this Hackney Seamless Steel Barrel with ease.

The bilged shape tells the whole story. The point of contact with the floor is so slight that even when filled this barrel can be rolled easily. And the bilge is also a fulcrum for turning and upending.

And notice the sturdy construction. The entire body of this Hackney Barrel is pressed from a single sheet of open hearth steel. There is not a seam in it. The head is made with a downward flange which fits into the slightly recessed chime—and dip brazed in it. This gives a contact area eight times that of the ordinary weld.

The two patented Hackney Raised Openings help this barrel to carry your product safely. Notice how they stand up above the head. No water or dirt can get into them—even when the plugs are loose.

These features make the Hackney Seamless Steel Barrel strong—tight—and easily handled.

If you are interested in what this Hackney Barrel will do for you—or would like information on any other Hackney package, write to—

THE HACKNEY DRUM has the same type raised openings that protect the Seamless Barrel against water and dirt getting in the barrel contents. In addition the Hackney Drum has integral hoops and the chimes are brazed over an area that is eight times that of the ordinary weld. That's real drum strength.

THE HACKNEY LIGHT SHIPPER for these manufacturers who want to get their shipments to the customer without excessive spoilage or leakage and without the nuisance of having barrels returned. This drum job is built by an organization that is geared up to making each package do the work for which it is intended.

The Pressed Steel Tank Company

1141 Continental Bank Bldg., Chicago 1317 Vanderbilt Concourse Bldg., New York City
5719 Greenfield Avenue, Milwaukee

Hackney
MILWAUKEE

ON THE LAZY BENCH

National Petroleum News

Do You Believe in Signs?

When the wind moans it is extremely bad luck to burn rubbish near your building.

If you can see your shadow from an oil lamp while filling the tank of a gasoline stove, it indicates a gathering of old friends at your home.

If you smell gasoline and look for it with a lighted match, it foretells that you are about to go on a long journey. —"Turns," Sherman Rotary Club.

J. B. Whitehead of the Vacuum Oil recently ordered a chicken sandwich in a New York restaurant. For some reason the waiter brought him a ham sandwich. After looking over the hammy affair, Whitehead remarks to waiter:

"It's a cinch this chicken made a hog of itself before it died."

—The Unloading Rack.

The Wrong Impression

Salesman (demonstrating a car to our friend Woltering of the Roxana)—"This car, Mr. Woltering, has a wonderful pick-up."

L. J. Woltering—"Neither my wife nor myself are interested in that sort of thing." —The Unloading Rack.

How Not to Advertise Gas

"We are burning it at home and at our office, together with over 600 satisfied customers."—From an ad in a Philadelphia paper.

—Pacific Gasoline Booster.

On a Train

Sweet Young Thing — "Are you a traveling man?"

L. V. Nicholas—"Don't try to flirt with me, young lady."

—The Unloading Rack.

True Story

Dick Bohn (to his stenographer)—"Here is a special delivery letter for you."

Steno.—"Oh, goody! That's my new party dress." —The Unloading Rack.

"I hear your brother has the hay fever pretty badly," said one man to another.

"He has. He even sneezes every time he passes a grass widow."—Magnolia Oil News.

The girl at the boarding house asked Slim why a chicken crosses the road. He said he didn't even know why they crossed their knees.—Bridgeport Driller.

Can You Beat It?

It was dark when she stopped at the roadside filling station.

"I want a quart of red oil," she said.

The service station man gasped and hesitated.

"Give me a quart of red oil," she repeated.

"A quart or r-r-red oil," he stuttered.

"Certainly," came the reply, "My tail light has gone out."

—Service Station News

Some Party

C. B. Singleton—"Rieke, how was that blonde steno. dressed at the party last night?"

W. F. Rieke—"I forget, but I do remember that her dress was checked."

Singleton—"Say, what kind of a party was that?"

—The Unloading Rack.

Terrible

N. J. Kirby (Sinclair)—"Why do you say that fellow has an impediment in his speech, Shevlin? Don't you know he is deaf and dumb?"

F. J. Shevlin—"Sure, but he has lost two fingers on his right hand."

—The Unloading Rack.

One operation any lady may be forgiven for talking about comments "Life."

"Mrs. Alvira McKeever has moved to the Memorial Hospital, where she will undergo an operation. Her gasoline station will be closed indefinitely."

—Herkimer (N. Y.) Evening Telegram

Running Schedule

Old Lady (to boy engrossed in cheap novel): "How often does this elevator go up, boy?"

Elevator Boy: "It goes up at the end of every chapter, lady."

Magnolene

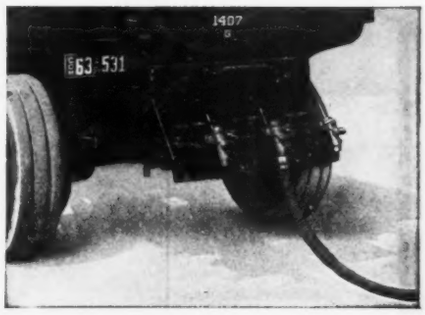
"A man is never older than he feels," declared the ancient beau, bravely. "Now I feel as fresh as a two-year old."

"Horse or egg?" asked the sweet young thing, brightly.

Son: "Dad what does a 'better-half' mean?"

Dad: "Just what she says."

THE GRANBERG PETROLEUM METER



A SIMPLE and RELIABLE instrument of UNIQUE construction

THE GRANBERG METER

is designed particularly for use on Tank Wagons and Loading Racks and for general service in distributing plants.

This meter will handle all refined petroleum products and will insure accurate records of receipts and deliveries.

It is particularly adapted to installations operating on low gravity heads.

Catalog upon Request

ASSOCIATED SUPPLY COMPANY
METER DEPARTMENT
79 New Montgomery St., San Francisco, Calif.

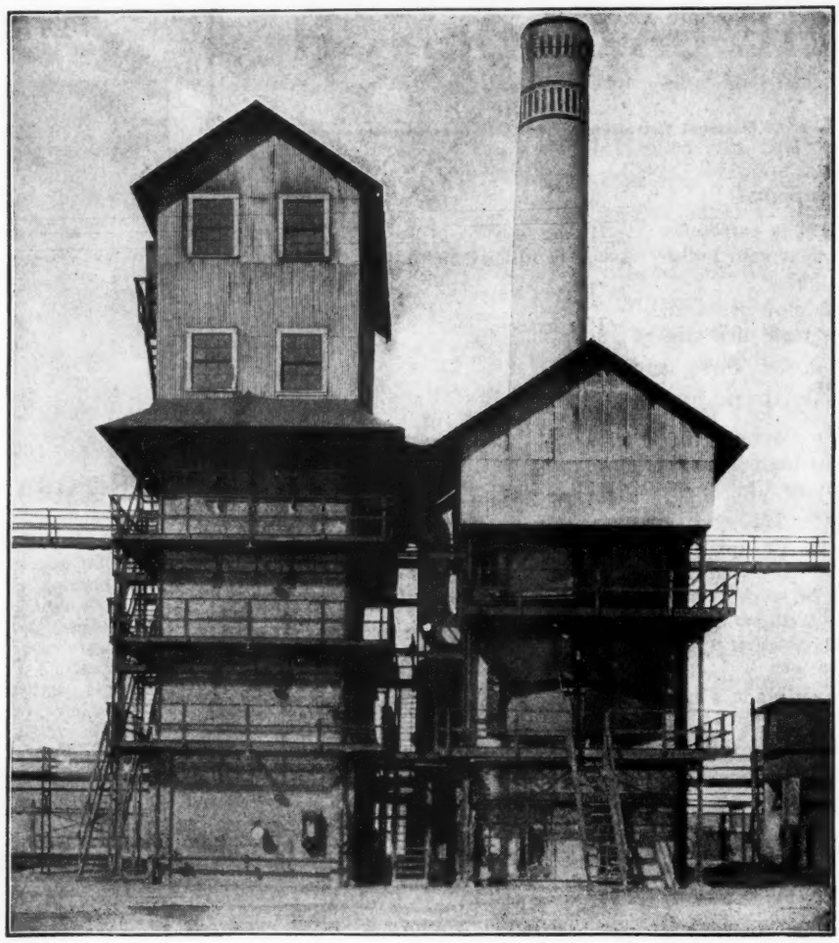
Something New in Cases

The bottles are held securely at the bottom by a narrow ledge, and at the top by a spring clip around their neck. There is a partition between each bottle which eliminates any chance of breakage and scratched labels.

The case itself has a stiff box frame, covered with smooth black cowhide, French sewed at edges, and lined with red velvet. Contains fourteen 4 oz. cut-bottom bottles with metal capped corks and ten ½ oz. squat grease jars held by adjustable bar. 209 Complete, with your name embossed in gold, only $14.15

Other Styles in our FREE Catalog

L-U-C-E
Builders of Sales Luggage
614 Delaware KANSAS CITY, MO.



Battery No 3. One of the Holmes-Manley Units at The West Tulsa Works of The Texas Company

This Battery holds the Record for Long Runs:

Run 36

From 6:00 A. M., 10-28-23 to 8:00 P. M., 12-30-23

Under pressure 1,526 Hours.

Charging Stock from Storage	Bbls.	Per Cent
Fresh Gas Oil	44,457	51.44
Cycle Gas Oil	41,967	48.56
Total	86,424	100.00
Yield		
Naphtha Distillate	32,387	37.48
Pressure Bottoms	51,491	59.58
Wet Gas—4,753,320 Cu. Ft. (3,159 Ft. per Bbl.)	1,505	01.74
Dry Gas—11,031,276 Cu. Ft. (4,702 Ft. per Bbl.)	2,346	02.71
*Coke—25,110 Lbs.	82	00.09
Total	87,811	101.60
Gain	1,387	01.60
Total Charge	86,424	100.00

Rate charged per hour 56.63 Barrels.
Average Operating pressure 240 Pounds.
Total Fuel Consumed 5.45 Barrels (Per 100 Bbls. charged).

Tests of Naphtha Produced

Gravity ..... 60.5 A.P.I.

A. T. S. M. Distillation

Initial	84°F
20%	189°F
50%	279°F
90%	394°F
End Point	414°F

*Minimum Coke Formation makes such Long Runs Possible

The Holmes-Manley *Cracking* Process

Long runs are customary with this process, due largely to minimum coke formation, the average of all 1925 operations being less than $^{65}/_{100}$ of 1% in stills, working and storage tanks.

The Licensee receives:—

1. *A Proven Process*
2. *Complete Technical Service*
3. *The Benefit of Future Developments*

Licenses Granted by

THE TEXAS COMPANY, U. S. A.

Apply to

R. C. HOLMES, *President*

17 Battery Place, New York, N. Y.

WAR on WASTE!

THE SINCLAIR LAW OF LUBRICATION

for every machine
of every degree of
wear
there is a scientific
Sinclair Oil
to suit its speed
and seal its power

SINCLAIR OILS
REG U.S. PAT. OFF.

A POWERFUL weapon in Sinclair's "War on Waste" is the Sinclair Law of Lubrication. This law tells the motorist that his engine has a "*degree of wear*" which requires just the right grade of oil "to suit its speed and seal its power". And he should change the lubricating oil in his car to fit its changing "degree of wear".

In following this Law of Lubrication, Sinclair dealers are rendering a real service to motorists. There is a science behind it—there's a real service behind it. There is a "War on Waste" behind it—a war on inefficient and destructive operation of machinery. Sinclair Opaline Motor Oil increases the efficiency and prolongs the life of the engine! It helps the motorist maintain economical transportation.

Why not increase your gallonage, by using this common-sense method of motor-oil recommendation?

SINCLAIR REFINING CO.
45 Nassau Street, New York

Atlanta	Detroit	Kansas City
Chicago	Houston	Omaha

[*1916-26—Ten years of manufacturing and distributing petroleum products of quality*]

SINCLAIR OPALINE
REG U.S. PAT. OFF.
MOTOR OIL

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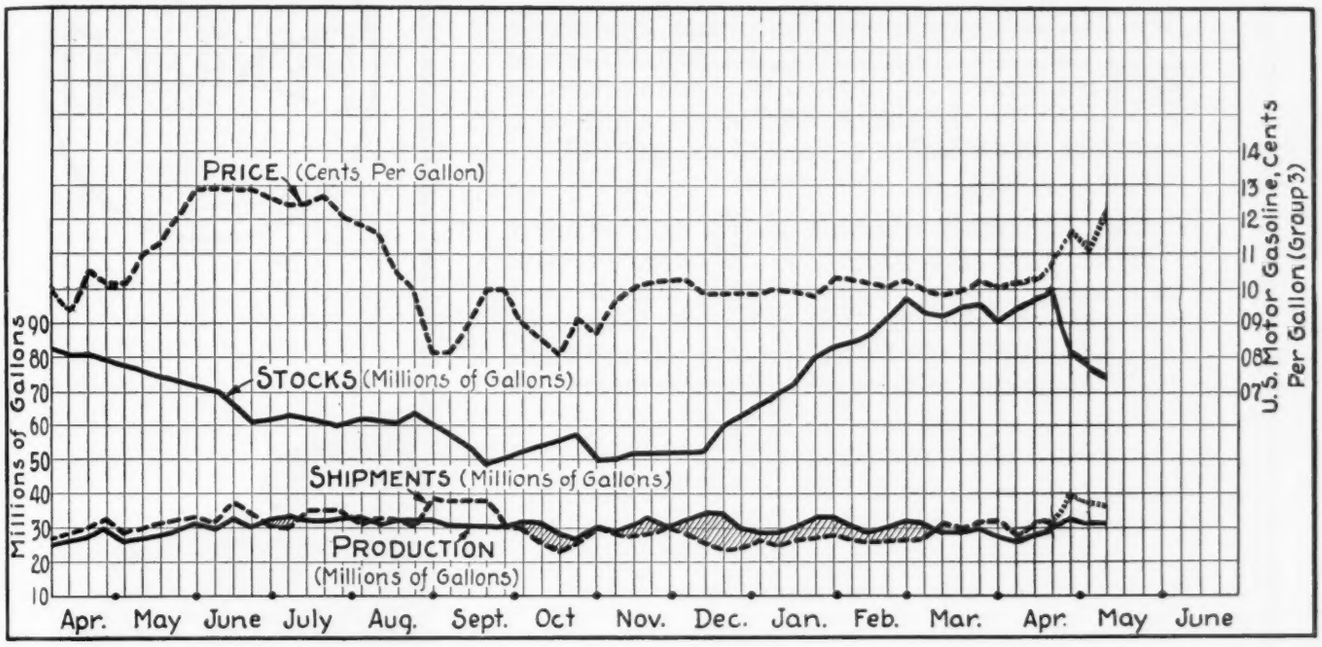
Refinery - Tank Wagon Markets

National Petroleum News

Barometer of the Mid-Continent Gasoline Markets Week Ended May 14


PRICE (Cents Per Gallon)
STOCKS (Millions of Gallons)
SHIPMENTS (Millions of Gallons)
PRODUCTION (Millions of Gallons)
Millions of Gallons
U.S. Motor Gasoline, Cents Per Gallon (Group 3)
10 20 30 40 50 60 70 80 90
07 08 09 10 11 12 13 14
Apr. May June July Aug. Sept. Oct Nov. Dec. Jan. Feb. Mar. Apr. May June

Mid-Continent Refiners Advance Gasoline 1 Cent

Staff Special

TULSA, May 15.

GASOLINE prices at Mid-Continent refineries were raised approximately 1 cent a gallon today following announcement of crude and tank wagon price advances. Previous to the crude advance the market had experienced a comparatively quiet week. Kerosenes were advanced a little less than gasoline. Heavy oils were not affected.

The crude advance of 25 cents a barrel by the Prairie Oil & Gas Co. was announced shortly after the opening of business today. Refiners immediately withdrew quotations. Several soon had revised price lists ready, anticipating a tankwagon change in these revisions. Others declared that since Saturday was a short day they would stay out of the market until Monday. Almost all expected a tank wagon change either Monday or Tuesday.

The Standard Oil Co. of Indiana, however, soon announced that on Monday, May 17, gasoline and kerosene would be advanced 1 cent a gallon. This news served only to bolster the new quotations which had just been issued.

Refiners probably will make every effort to absorb the cent a gallon advance on gasolines. The head of one of the largest plants in the Mid-Continent pointed out that refiners will have to look to gasolines and kerosene to carry the burden of higher crude prices since distillates and fuel oils are about out of the picture for this season.

The 25-cents-a-barrel increase in crude is approximately ½ cent a gallon in the cost to the refiner, not counting any premiums he might be paying. Estimating that 50 per cent of the yield of a gallon of crude is gasoline and kerosene, it will be seen that since the refiner cannot at this time make his heavy oils pay their share of the ½ cent increase in cost, he will have to double up on the gasoline and kerosene prices to break even.

Refiners generally took ¼ to ½ cent of the tank wagon increase in kerosene. The market has kept most of the trade guessing this year, and this factor probably accounted for the smaller advance, refiners wanting to feel their way a little further.

Talk of a crude advance had been heard persistently in the last two weeks. Within the last few days the idea that there would be an advance this week had taken hold in consuming territory.

Refinery markets received their new strength at a time considered generally as advantageous for refiners. While it is true an unusually large amount of gasoline had been shipped in the last week of April and the first week in May, some refiners reported they were catching up with orders placed before tank wagon advances late in April.

New business has been delayed meanwhile because of the enormous shipments in the last week in April and the first one in May. These shipments which in each instance was within a million gallons of the peak shipments during one week last June, have filled the storage tanks of jobbers to capacity. Marketers also apparently overestimated the demand and they, too, have found themselves with considerable gasoline and no place to put it.

Weather has been blamed by a few as causing the slowing up of orders, but weather reports indicate that for the first week in May few places in consuming territory had sub-normal temperatures, or above normal precipitation. The weather this week has been about on a par with that of the previous week.

(Continued on page 181)

Pure Pennsylvania Crude

PENRECO

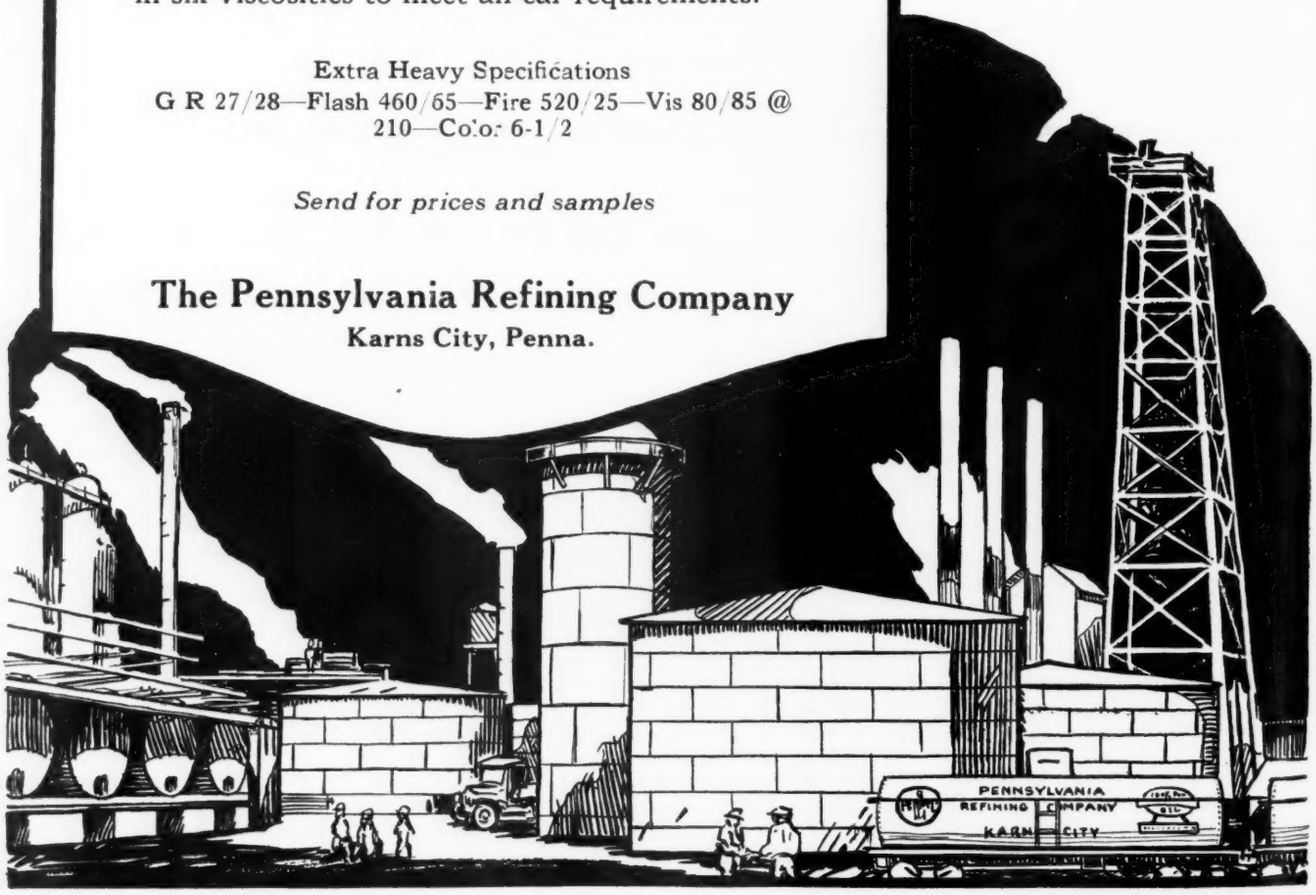
THE base of Penreco Petroleum Products is 100% pure Pennsylvania Crude. Down in the heart of big oil production, where derricks dot the sky by the thousands Penreco is refined in a modern plant under a special straight still reducing process.

Penreco motor oils combine quality and economy—higher flash and fire—triple filtration—bright, sharp, clear, color—dewaxed 100% lubrication—lower carbon content—1000 miles without changing oil in crank case. Penreco motor oils are made in six viscosities to meet all car requirements.

Extra Heavy Specifications
G R 27/28—Flash 460/65—Fire 520/25—Vis 80/85 @ 210—Color 6-1/2

Send for prices and samples

The Pennsylvania Refining Company
Karns City, Penna.



PENRECO
Pennsylvania Crude Products

Refinery Markets on Light Oils and Lubricants

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices May 17	Prices May 10	Prices May 3
52-54 Naphtha	13 -13½	13 -13½	12¾-13
54-56 Naphtha	13½-13¾	13½-13¾	13½-13½
58-60 Gasoline	13¾-14	13¾-14	13¾-14
60-62 Straight-run gasoline	14¾-14½	14¾-14½	-14½
64-66 Straight-run gasoline	15 -15¼	15 -15½	15 -15¼
68-70 Straight-run gas. 350-360 E.P.	15½-16	-16	-16
68-70 Straight-run gas. 305-320 E.P.	-20	-20	-20
OKLAHOMA			
48-50 450 E. P. naphtha	-11¾	10¾-11	-10¾
50-52 450 E. P. naphtha	-11¾	-11	10¾-10⅞
56-58 450 E. P. gasoline	11¾ 12	-11	-11
56-58 U. S. Motor gasoline	12 -12⅛	11 -11⅛	11 -11⅛
58-60 450 E. P. gasoline	12 -12⅛	11 -11⅛	11 -11⅛
58-60 U. S. Motor 437 E. P.	12 -12½	11¾-11⅝	-11⅝
60-62 400 E. P. gasoline	-13	12¾-12⅞	12¾-12⅞
64-66 390 E. P. gasoline	-13¼	-12½	12½-12⅝
64-66 375 E. P. gasoline	13¼-13¾	12½-12¾	12⅝-13
68-70 350-360 E. P. gasoline	13¾-14	13¾-13½	13¼-13½
64-66 437 E. P. blend	-12	-11¾	-11
KANSAS*			
58-60 U. S. Motor gasoline	12½-12¾	-11¾	-11¾
60-62 400 E. P. gasoline	-13¼	12½-12¾	12½-12¾
64-66 375 E. P. gasoline	13½-13¾	13½-13¾	13½-13¾
*F. O. B. refinery Kansas destination.			
NORTH TEXAS			
48-50 450 E. P. naphtha	-11½	-10¾	10½-10¾
56-58 450 E. P. gasoline	12½-12¾	10¾-11	-11
58-60 450 E. P. gasoline	11¾-11⅞	-11	11 -11⅛
56-58 U. S. Motor gasoline	11¾-12	11 -11⅛	-11⅛
58-60 U. S. Motor gasoline	12 -12¼	11¼-11⅜	11¼-11½
64-66 390 E. P. gasoline	13 -13¼	12½-12¾	12½-12¾
64-66 375 E. P. gasoline	13¼-13¾	12½-12¾	12¾-13
68-70 350-360 E. P. gasoline	-14¼	13 -13½	13¼-13½
NORTH LOUISIANA			
58-60 U. S. Motor 437 E. P.	-12	-11¾	11¾-11½
ARKANSAS			
58-60 450 E. P. gasoline	-12¼	-11¾	-11¾
58-60 U. S. Motor gasoline	12½-12¾	11½-11¾	12 -12¼
64-66 375 E. P. gasoline	13¼-13½	-13¼	13½-13¾
CALIFORNIA			
54-60 U. S. Motor gasoline	12½-13	12½-13	12½-13
42-45 Engine distillate, 445-480 E.P.	10 -10½	10 -10½	10 -10½

Note: This is without the 2-cent state tax included in the price of California refiners for shipments within the state.

NEW ENGLAND (F. O. B. Boston and Fall River)			
U. S. Motor gasoline	-13⅞	-14¼	-14¼

NATURAL GASOLINE

(Note: End point of all grades, not over 375° F.)

OKLAHOMA			
Grade Double A	-11	10½-10¾	10¾-11
Grade A	-11	10½-10¾	10¾-11
Grade Double B	-10¾	-10¼	-10
Grade B	-10¾	-10¼	-10
Grade C	-10½	-10	9¾-10

NOTE—Specifications adopted by Ass'n. of Nat. Gaso. Manufacturers
Grade Double A—80-87.9 gravity, 90% recovery, not over 375 E. P.
Grade A—72-79.9 gravity, 90% recovery, not over 375 E. P.
Grade Double B—84-92 gravity, 85% recovery, not over 375 E. P.
Grade B—76-83.9 gravity, 85% recovery, not over 375 E. P.
Grade C—80-90 gravity, 78% recovery, not over 375 E. P.

NORTH LOUISIANA			
*Grade Double A	-11½	11 -11¾	11 -11¾
*Grade Double B	-11¾	10½-10¾	10½-10¾
*Grade C	-11	10½-10¾	10 -10¾
*F. O. B. Monroe District.			
NORTH TEXAS			
*Grade Double A	-11	10½-10¾	10¾-11
*Grade A	-11	10½-10¾	10¾-11
*Grade Double B	-10¾	-10¼	-10
*Grade B	-10¾	-10¼	-10
*Grade C	-10½	-10	9¾-10
*F. O. B. Breckenridge.			
CALIFORNIA			
78-84° 375 E. P.	15½-16	15½-16	15½-16
PENNSYLVANIA			
68-70 Grav. 437 E. P.	14 -14½	14 -14¾	14 -14¾
64-66 Grav. 437 E. P.	14 -14½	14 -14¾	14 -14¾
60-62 Grav. 437 E. P.	14 -14½	14 -14¾	14 -14¾
68-70 Grav. 420 E. P.	14¼-14¾	14¼-14½	14¼-14½

BURNING OILS

PENNSYLVANIA			
45 Water White Kerosene	12¾-12½	-11	-10½
46 Water White Kerosene	12¾-13	11 -11¼	-11
47 Water White Kerosene	-13	11¼-11½	-11½
300 Burning Oil	- 9	8½- 9	8½- 9
OKLAHOMA			
41-43 Water White Kerosene	-10½	10 -10¼	9 - 9¼
42-44 Water White Kerosene	-10¾	-10½	9½- 9¾
KANSAS			
41-43 w. w. kerosene	-10¾	10 -10¼	9¼- 9½
42-44 w. w. kerosene	11 -11¼	10¼-10½	- 9¾

NORTH TEXAS	Prices May 17	Prices May 10	Prices May 3
41-43 Water White Kerosene	-10½	10 -10¼	9 - 9¼
NORTH LOUISIANA			
41-43 Water White Kerosene	-10½	10 -10¼	9 - 9¼
ARKANSAS			
41-43 Water White Kerosene	10½-10¾	10¼ 10½	9¾- 9½
CALIFORNIA			
38-40 Water White Kerosene	7 - 8	7 - 8	7½- 8¼
NEW ENGLAND			
*40-43 Water White Kerosene		-11¼	-10¼

NEUTRAL OIL

PENNSYLVANIA (Viscosity at 70° F.)			
200 Vis. No. 3 Assoc. Filt.	28 -29	27½-28	27½-28
180 Vis. No. 3 Assoc. Filt.	26 -27	25½-26	25½-26
150 Vis. No. 3 Assoc. Filt.	22 -23	21½-22	21½-22
(Non-Viscous)			
34 Grav. 350-360 Flash	8 - 8¼	8 - 8¼	8 - 8¼
36 Miners Neutrals 300-305 Flash	7¼- 7½	7¼- 7¼	7¼- 7¼
OKLAHOMA (Viscosity at 100° F.)			
100 Vis. No. 2 color	6½- 7¼	6½- 7¼	6½- 7¼
150 Vis. No. 3 color	9 -10	9½-11	9½-11
150 Vis. No. 4 color	9½- 9¾	9½- 9¾	9½- 9¾
180 Vis. No. 3 color	-10½	10¼-10½	10¼-10½
180 Vis. No. 4 color	9½-10¾	10 -10½	10 -10½
180 Vis. No. 5 color	9½-10¾	-10¾	-10¾
200 Vis. No. 3 color	-11¾	-11¾	-11¾
200 Vis. No. 4 color	11¼-11¾	11¼-11¾	11¼-11¾
200 Vis. No. 5 color	9½-11¼	9½-11¼	9½-11¼
220 Vis. No. 3 color	12 -13	12 -13	12 -13
220 Vis. No. 4 color	13 -13¼	13 -13¼	13 -13¼
220 Vis. No. 5 color	12 -12¾	-12¾	-12¾
240 Vis. No. 3 color	14 -16	14 -16	14 -16
240 Vis. No. 4 color	14¼-14½	14¼-14½	14¼-14½
240 Vis. No. 5 color	16 -17	-14	-14
280 Vis. No. 3 color	-14	16 -17	16 -17
280 Vis. No. 4 color	16¼-16½	16¼-16½	16¼-16½
280 Vis. No. 5 color	15¼-16	15¼-16	15¼-16
300 Vis. No. 5-6 color	17 -18½	17 -18½	17 -18½
GULF COASTAL (Viscosity at 100° F; cold test 0)			
100 Vis. No. 2 Color Unfilt. Pale	8 - 8½	7½- 8	7½- 8
200 Vis. No. 3 Color Unfilt. Pale	11½-12	11¼-12	11½-12
300 Vis. No. 3 Color Unfilt. Pale	13 -14	13 -13½	13 -13½
500 Vis. No. 3½ Color Unfilt. Pale	15 -16	15 -15½	15 -15½
750 Vis. No. 4 Color Unfilt. Pale	19 -20	19 -20	19 -20
200 Vis. No. 5½ Color Red Oil	10 -10½	9½-10	9½-10
300 Vis. No. 5½ Color Red Oil	11½-12	11¼-12	11¼-12
500 Vis. No. 6 Color Red Oil	13 -14	13 -13¼	13 -13¼
750 Vis. No. 6 Color Red Oil	17½-18½	17 -18	17 -18
CALIFORNIA (Viscosity at 100° F.)			
100 Vis. No. 2 color	11 -11½	11 -11½	11 -11½
100 Vis. No. 3 color	8½- 9	8½- 9	8½- 9
200 Vis. No. 3 color	13½-14	13½-14	13½-14
300 Vis. No. 3 color	15 -15½	15 -15½	15 -15½
450 Vis. No. 3½ color	18 -18½	18 -18½	18 -18½
550 Vis. No. 3 color	20 -21	20 -21	20 -21
600 Vis. No. 3½ color	21 -22	21 -22	21 -22
100 Vis. No. 5 color	7 - 7½	7 - 7½	7 - 7½
200 Vis. No. 5 color	12 -12½	12 -12½	12 -12½
300 Vis. No. 5 color	13 -13½	13 -13½	13 -13½
400 Vis. No. 5 color	15 -16	15 -16	15 -16
500 Vis. No. 5 color	16 -17	16 -17	16 -17
600 Vis. No. 6 color	17 -18	17 -18	17 -18
700 Vis. No. 7 color	18 -19	18 -19	18 -19

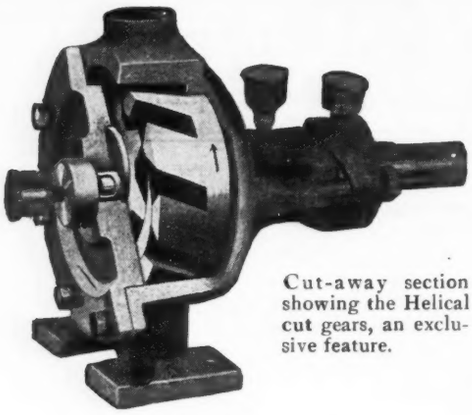
CYLINDER STOCKS

OKLAHOMA			
190-200 Vis. at 210° Bright Stock	31 -35	31 -35	31 -35
150-160 Vis. at 210° Bright Stock	27 -31	27 -31	27 -31
600 E Stock, 140-150 Vis. — 210°	18 -20	18 -20	18 -20
600 Steam Refined Olive Green	8½-11	8½-11	8½-11
600 Steam Refined Dark Green	6½- 7	6½- 7	6½- 7
Black Oil	5 - 6	5 - 6	5 - 6
PENNSYLVANIA (1-inch Immersion Test)			
600 Steam Refined	14½-15	14½-15	14½-15½
650 Steam Refined	-21	20½-21	21 -21½
600 Flash	24 -25	24 -25	24 -25½
625 Flash Steam Refined	-34	-34	-34
600 Warren E	21 -21½	20½-21	-21
600 Oil City E	20 -20½	19½-20	-20
600 Filtered D		25 -26	25 -26
Cold Test Stocks (bright filtered)	38½-40	38½-40	38½-39
Cold Test Stock (dark filtered)	36 -38	36 -38	36 -37

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher.)

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

*No quotation.



Cut-away section showing the Helical cut gears, an exclusive feature.

TYPE 6—A Twin Gear Drive unloading Pump with Motor

The Perfection Rotary Pump with the Shearing Cut

The teeth of the rotor in the Perfection Rotary Pump work like a pair of scissors on an angle instead of head on like so many splashing buckets.

Because there is no shock or strain it runs more smoothly and delivers a uniform flow. It is the ideal pump for unloading oil or gas. Made in various sizes and with various hook-ups.

Write for catalog and prices.

Perfection Manufacturing Company

2194 East Hennepin Ave. **Minneapolis, Minn.**

TRUCK TANKS WITH A REPUTATION

From coast to coast BROWN CERTIFIED TANKS are the standard of comparison. There are no secrets nor patents on these tanks, just good, honest, full weight material, correctly built by real tradesmen.

When you buy a truck tank you dont want to purchase substitutes, nick-nacks, nor freak experiments, You WANT, and have a RIGHT TO EXPECT, EFFICIENT SERVICE, OIL TIGHT DELIVERY, and ATTRACTIVE APPEARANCE.

These are the reasons why hundreds of successful Oil Companies have standardized on

BROWN CERTIFIED TRUCK TANKS

It will pay you to investigate their merits

A 1650 gallon with stake barrel carriers and underslung canboxes

BROWN SHEET IRON & STEEL CO. **ST. PAUL, MINN.**

— *Tear out this page and mail it today* —

We are interested in your tanks. Send your catalog and prices.

Make of Truck..... Size Tank Required.....

Other equipment on which you may send prices.....

Name..... Address.....

Refinery Markets on Wax and Heavy Oil Products

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

WAX

PENNSYLVANIA	Prices May 17	Prices May 10	Prices May 3
	(Per Pound, New York)		
122-124 White Crude Scale..	- 5	- 5	5 - 5⅛
124-126 White Crude Scale..	- 5⅛	- 5⅛	5⅛- 5¼
OKLAHOMA	(Per Pound, Group 3)		
124-126 White Crude Scale..	4¾- 5	4¾- 5	- 5
CALIFORNIA			
White Crude Scale.....	5½- 6	5½- 6	5¾- 6

FUEL OIL

PENNSYLVANIA			
36-40 Fuel Oil.....	7 - 7⅛	7 - 7¼	6¾- 7
30-34 Fuel Oil.....	6¼- 6½	6¼- 6¾	- 6½
28-30 Fuel Oil.....	6¼- 6½	6 - 6½	- 6
OKLAHOMA			
38-40 Straw distillate.....	4⅝- 4¾	4⅝- 4¾	4⅝- 4¾
36-38 Straw distillate.....	4⅜- 4½	4⅜- 4½	4⅜- 4½
32-36 Gas oil (Gal.).....	4 - 4¼	4 - 4¼	4⅛- 4¼
26-30 Fuel oil (Bbl.).....	1.40 -1.50	1.45 -1.55	1.50 -1.55
24-26 Fuel Oil (Bbl.).....	1.32½-1.37½	1.37½-1.40	1.37½-1.42½
22-26 Fuel Oil (Bbl.).....	1.27½-1.32½	1.30 -1.32½	1.30 -1.35
18-22 Fuel Oil (Bbl.).....	1.27½-1.30	-1.30	-1.30
KANSAS*			
38-40 Light straw distillate..	4⅛- 4⅜	4¼- 5	- 4¼
36-38 Light straw distillate..	- 4½	- 4½	- 4½
32-36 Gas Oil.....	4⅛- 4½	4⅛- 4½	- 4⅛
18-22 Fuel Oil.....	1.35 -1.40	1.35 -1.40	1.35 -1.40
24-26 Fuel Oil.....	1.50 -1.55	1.50 -1.55	1.45 -1.55
*F. O. B. refinery, Kansas destination.			
NORTH TEXAS			
38-40 Straw Distillate.....	4 - 4⅛	4⅛- 4⅜	4¼- 4⅜
32-36 Gas Oil (Gal.).....	3¾- 4	3¾- 4	- 4
24-26 Fuel per (Bbl.).....	1.30-1.35	1.30 -1.40	1.37½-1.40

GULF COASTAL	Prices May 17	Prices May 10	Prices May 3
Fuel.....	1.75 -1.85	1.55 -1.65	1.55 -1.65
Gas Oil.....	5¼- 5½	- 5¼	- 5¼
NORTH LOUISIANA			
32-36 Light Gas Oil (Gal.)...	4 - 4¼	4 - 4¼	4 - 4½
16-20 Fuel Oil (Bbl.).....	-1.25	1.20-1.25	1.20 -1.25
ARKANSAS			
32-36 Gas Oil.....	4⅜- 4½	4¼- 4½	- 4½
Smackover Crude Fuel.....	1.12½-1.20	1.12½-1.20	1.10 -1.17½
Road oil.....	-1.26	-1.26	-1.26
CALIFORNIA*			
14-18 Fuel Oil (Bbl.).....	1.00	1.00	1.00
14-18 Bunker Oil (Bbl.).....	1.00	1.00	1.00
24-30 Gas Oil (Bbl.).....	1.15	1.15	1.15
27 + Diesel Oil (Bbl.).....	1.15	1.15	1.15
*(San Joaquin Valley, San Francisco 4c per bbl. more.)			
NEW ENGLAND	(F. O. B. Boston and Fall River)		
30-32 Gas Oil (Gal.).....	5¾- 5⅞	5¾- 5⅞	- 5¾
Fuel Oil (Bunker C) Bbl....	-1.82½	-1.82½	-1.82½

PETROLATUMS

PENNSYLVANIA			
Snow White.....	-11	-11	-11
Lily White.....	- 9½	- 9½	- 9½
Cream White.....	- 6¾	- 6¾	- 6¾
Light Amber.....	- 3⅞	- 3⅞	- 3⅞
Amber.....	- 3¾	- 3½	- 3¾
Red.....	3½- 3¾	- 3¾	- 3¾
Green.....	1¾- 2	1¾- 2	1¾- 2

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

(Continued from page 177)

Refiners were not alarmed, however, most feeling that new business will pick up as soon as gasoline already sold is moved out. Shipments previous to this week gave refiners sufficient leeway to hold their prices fairly well in line. Carload marketers pushed for shipping instructions on gasoline already bought, did some price shading.

Naphthas continue to be scarce and as long as kerosene is bringing present prices there is little probability of lower quotations, according to the few refiners in Oklahoma who are making naphthas.

Orders were light on 56-58, 450 and 58-60, 450 end point gasolines. A considerable amount of these commodities was bought along with the other gasolines late in April, and some shading of prices was reported late this week.

U. S. Motor gasoline shipments were slowing up as the week ended, when compared with the movement two and three weeks ago. Refiners who had to keep most of their production moving made concessions, but others who could either sell or store, held their prices around 11½ cents per gallon

U. S. Motor Bought for Export

THE Sinclair Refining Co. last Thursday bought a million gallons of U.S. Motor from a Kansas refiner for export at a price reported to be 11 cents per gallon, Group 3 basis. The inquiry was circulated generally in the Mid-Continent.

This purchase was pointed to by many as an indication that crude oil would be advanced within a week. This company bought a quantity of U. S. Motor gasoline late in January, and the Sinclair Crude Oil Purchasing Co. advanced crude on Feb. 1. Those who thought this second purchase was a forerunner of a crude advance, however, expected the Sinclair purchasing company to lead in raising prices this time.

The higher gravity gasolines have been rapidly losing their strength as warmer weather approached. The strike in England, while it did not last long, caused exporters to stay out of the market until conditions became more settled.

This lack of interest by exporters has been keenly felt in north Texas. Some low prices were placed on small quantities of distress gasoline. One exporter last Wednesday was offered a quantity of 60-62, 400 e.p. gasoline at 11¾ cents per gallon, almost ½ cent under the Group 3 market for that day.

Texas refiners are now predicting that the Standard Oil Co. of New Jersey, early next week will advance export gasoline prices which they pay on contracts.

Natural Gasoline Slow

NATURAL gasolines did not move as well this week as many had expected. Some of the larger manufacturers said that they were receiving orders to increase shipments on contracts but that spot orders were not plentiful.

Refiners who have kerosene to offer on the spot market, are reaping a good profit, but few enjoy this position. Most apparently are well booked for deferred shipment, and several are known to be shipping 41-43 water white which they sold at 8 to 9 cents per gallon. More kerosene was offered this week on the open market, however, but the bulk of these offers appear to have been from marketers who had bought some time ago for May delivery. Some of these marketers are getting from 2 to 2¼ cents per gallon profit.

Heavy Oils Moving Slowly

THE demand for heavy oils continues to slaken, and prices fell in some areas.

Fuel oils showed the most pronounced downward turn in prices. Since the crude advance, however, refiners say the present prices probably will hold for the remainder of May at least because many of them are sold up on fuels for that period.

Neutral and cylinder oil quotations which were put into effect after the crude advance of Feb. 1, have not been changed materially by refiners, but a few prices have been shaded. Since today's crude advance most refiners have withdrawn quotations on lubes and cylinder stocks and probably will not issue a new list before Tuesday or Wednesday.

CHICAGO, ILL.—Harry L. Robinson of the Calumet Refining Co., Chicago, has been at Mentor, O., attending the funeral of his father who passed away May 3.

Market Section

Chicago Gasoline Trading Light Before Recent Advances

CHICAGO, May 15.—A 25-cent advance in prices of all grades of Mid-Continent crude by Prairie Oil & Gas Co. May 15 and a 1-cent advance in tank wagon prices of both gasoline and kerosene by Standard Oil Co. of Indiana to take effect Monday, May 17, were the only events to break the monotony of the Chicago resale market this week.

The advance in crude and tank wagon prices coming so late failed to affect the movement of petroleum products this week. As is customary, most sellers in Chicago withdrew quotations on all grades of gasoline and kerosene when the advances were announced. One or two refiners quoted 58-60 U. S. Motor gasoline 12 to 12¼ cents today and a marketer reported the sale of one car of the same grade at 12 cents. Otherwise, there was little activity on Saturday. Jobbers received the information too late to buy on the one short business day of the week.

Spot gasoline movement this week was in small lots only, consisting largely of distress stuff which, however, was not of sufficient volume to have any serious effect on prices. Distress gasoline virtually has made the actual going market.

The range of quotations for 58-60 U. S. Motor gasoline has been wide, but most sales were around 11¼ cents. Refiners held their prices for new business firmly at 11¼ cents. Their sales during the latter part of April for early May shipment have taken care of the greater portion of their output and consequently have not been pressed for orders. Several refiners also report being behind on shipments, and others state contracts are taking the larger part of their daily runs. In a few instances 58-60 U. S. Motor has been shaded to as low as 11 cents. The 58-60—450 end point gasoline held fairly steady around 11 cents.

Activity in kerosene subsided somewhat but prices show no symptoms of weakening. One year ago this week 41-43 water white kerosene was freely available 4¼ to 4⅜ cents and any time last week it was hard to find a car for quick shipment at 10 cents. The 42-44 water white grade was selling at 4½ to 4⅝ cents a year ago; today this grade is so scarce it is negligible in Chicago as a market factor. Several marketers report they have been moving Pennsylvania kerosene into Michigan and Ohio at prices that would figure about 9¾ to 10 cents, Group 3.

No kerosene prices could be obtained from the Chicago trade on Saturday. One or two dealers expressed their ideas of the 41-43 market as 11 to 11¼ cents but refused to quote these figures.

With the distillate season at an end, that oil is freely available at 4½ to 4¾ cents. Gas oil is steady at 4 to 4⅛ cents for cracking plant grade, and 4¼ to 4⅜ cents for straight run goods.

Prices of Gulf Coastal Lubes Marked Up

HOUSTON, May 17.—Contract prices of Gulf Coastal lubricants advanced 2/5 cent per gallon automatically May 15 when price of Gulf Coastal crude was advanced 10 cents per barrel. Most refiners advanced their spot prices ½ cent per gallon on all grades for which recent demand has been good. A few grades however, lagged behind.

Better weather and increased demand from some parts of the country, had brought a firmer tone to the market even before crude prices were advanced. Some low viscous grades—those of 100 and 200 viscosity at 100° F.—are hard to get because larger refineries have been using the material for these lubes for cracking stock.

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Week's Price Changes Tank Wagon Markets

Gasoline Changes

Standard of Kentucky—In the **May 3** general 1 cent advance throughout territory, some points were advanced irregularly. Lexington t.w. and s.s. prices were advanced 2 cents, to 24 cents and 27 cents respectively on that date, including 5 cent state tax. Prices are corrected in this week's tank wagon table.

Standard of Indiana—T.w. and s.s. prices gasoline advanced 1 cent, through territory, **May 17,** excepting South Dakota points, where advance was only ½ cent. Prices at Huron had been reduced 1 cent to 22 cents, t.w., and 24 cents, s.s. on May 8, and with the ½ cent advance on **May 17,** became 22.5 cents and 24.5 cents respectively.

Prices of all naphthas were also advanced 1 cent, **May 17.**

Standard of Nebraska—T.w. and s.s. prices gasoline advanced 1 cent, through Nebraska, **May 17.**

Magnolia Petroleum—May 5, Magnolia puts into effect its new contract in Texas, which allows 3 cents off from service station price to dealers. Its service station price in common point territory throughout the state, effective **May 5,** is 19 cents and to the dealer, therefore, is 16 cents. All points carried in the accompanying tank wagon table are 19 cents at the service station, excepting El Paso, which is 20 cents.

Canada—In the May 5 advance of 1 cent on gasoline which was announced as general throughout Canada, points in western provinces including Alberta and British Columbia were unchanged. Prices are corrected in the tank wagon table in this week's issue.

Standard of Ohio—T.w. and s.s. prices gasoline advanced 1 cent, through Ohio, to 22 cents and 24 cents respectively, including 2 cent state tax, **May 18.** Prices have not been changed in the accompanying tank wagon table, as prices in that table are those in effect on May 17.

Naphtha and Varnolene advanced 1 cent coincident with gasoline.

Kerosene Changes

Atlantic Refining—Kerosene advanced 1 cent, Pennsylvania and Delaware, **May 17.**

Standard of Kentucky—Kerosene advanced 1 cent, through territory, **May 12.**

Standard of Indiana—Kerosene advanced 1 cent, through territory, **May 17.**

Standard of Nebraska—Kerosene advanced 1 cent, through Nebraska, **May 17.**

Magnolia Petroleum—Kerosene advanced 1 cent, Texas, May 8, and also at Texarkana, 1 cent, **May 8.**

Canada—Kerosene advanced 1 cent at Regina, Sask., to 27.5 cents at tank wagon.

Standard of Ohio—Kerosene advanced 1 cent, through Ohio, to 17 cents at tank wagon, **May 18.** Prices have not been changed in the accompanying tank wagon table, as prices in that table are those in effect on May 17.

Tank Wagon, Service Station Markets for Gasoline and Kerosene In United States Territories and Canada

These Prices in Effect May 17, 1926

S.O. NEW JERSEY TERRITORY

	Gasoline				Oil
	T.W.	Tax	Total T.W.	S.S.	T.W.
Atlantic City, N. J.	18	0	18	*	16
Newark, N. J.	18	0	18	20	16
Annapolis, Md.	18	2	20	*	16
Baltimore, Md.	18	2	20	23	16
Cumberland, Md.	18	2	20	23	16
Washington, D. C.	18	2	20	23	16
Danville, Va.	18	4½	22.5	*	16
Norfolk, Va.	18	4½	22.5	25.5	16
Richmond, Va.	18	4½	22.5	25.5	16
Roanoke, Va.	18	4½	22.5	25.5	16
Petersburg, Va.	18	4½	22.5	*	16
Williamsburg, Va.	18	4½	22.5	*	16
Charleston, W. Va.	18	3½	21.5	24.5	16
Clarksburg, W. Va.	18	3½	21.5	24.5	16
Keyser, W. Va.	18	3½	21.5	*	16
Parkersburg, W. Va.	18	3½	21.5	24.5	16
Wheeling, W. Va.	18	3½	21.5	24.5	16
Charlotte, N. C.	18.5	4	22.5	25.5	16
Hickory, N. C.	18.5	4	22.5	*	16
High Point, N. C.	18.5	4	22.5	*	16
Mt. Airy, N. C.	18.5	4	22.5	*	16
Salisbury, N. C.	18.5	4	22.5	*	16
Charleston, S. C.	18.5	5	23.5	26.5	16
Columbia, S. C.	18.5	5	23.5	26.5	16

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

*New York City	20	0	20	24	17
Albany, N. Y.	20	0	20	22	17
Buffalo, N. Y.	19	0	19	22	17
Rochester, N. Y.	20	0	20	24	15
Syracuse, N. Y.	20	0	20	22	16
Boston, Mass.	20	0	20	23	17
Augusta, Me.	20	3	23	26	17
Manchester, N. H.	20	2	22	26	17
Burlington, Vt.	20	2	22	24	17

*In steel barrels.

ATLANTIC REFINING

Pittsburgh, Pa.	19	0	19	*24	17
Philadelphia, Pa.	19	0	19	*24	17
Allentown, Pa.	19	0	19	*24	17
Erie, Pa.	17	0	17	*22	15
Scranton, Pa.	19	0	19	*24	17
Altoona, Pa.	19	0	19	*24	17
Dover, Del.	19	2	21	24	17
Wilmington, Del.	19	2	21	24	17
Providence, R. I.	20	1	21	23	17
Boston, Mass.	20	0	20	23	17
Springfield, Mass.	20	0	20	22	17
Worcester, Mass.	20	0	20	23	17
Hartford, Conn.	20	2	22	25	16
New Haven, Conn.	20	2	22	25	17

*Contains 2-cent tax collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	19	5	24	27	18
Louisville, Ky.	19	5	24	27	17
Covington, Ky.	18	5	23	26	18
Clarksdale, Miss.	18	4	22	25	16.5
Jackson, Miss.	18	4	22	25	15.5
Natchez, Miss.	17.5	4	21.5	24.5	16
Vicksburg, Miss.	17.5	4	21.5	24.5	16
Birmingham, Ala.	19	2	21	24	18.5
Mobile, Ala.	18	2	20	23	17
Montgomery, Ala*	20	2	22	25	19.5
Atlanta, Ga.	†20	3½	24	27	19
Augusta, Ga.	†20	3½	24	27	19
Macon, Ga.	†20	3½	24	27	19
Savannah, Ga.	†18	3½	22	24	17
Jacksonville, Fla.	18	4	22	25	17
Miami, Fla.	20	4	24	27	18.5
Tampa, Fla.	18	4	22	25	17
Pensacola, Fla.	16	4	20	23	17.5

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

†Georgia has ½ cent per gal. inspection fee on gasoline which is deducted as well as the state gasoline road tax of 3½ cents, to get the actual net tank wagon market to dealer.

S. O. INDIANA

	Gasoline				Oil
	T.W.	Tax	Total T.W.	S.S.	T.W.
Chicago, Ill.	19	0	19	21	15.5
Decatur, Ill.	19.2	0	19.2	21.2	16
E. St. Louis, Ill.	18.1	0	18.1	20.35	15.1
Joliet, Ill.	19.4	0	19.4	21.4	16.2
Peoria, Ill.	19.2	0	19.2	21.2	16
Quincy, Ill.	19.2	0	19.2	21.2	15.8
Indianapolis, Ind.	19.2	3	22.2	24.2	16.2
Evansville, Ind.	19	3	22	24	16
South Bend, Ind.	19.4	3	22.4	24.4	16.4
Detroit, Mich.	19.8	2	21.8	23.8	16.7
Grand Rapids, Mich.	19.7	2	21.7	23.7	16.6
Saginaw, Mich.	19.9	2	21.9	23.9	16.8
Madison, Wis.	19.3	2	21.3	23.3	16
Milwaukee, Wis.	19.1	2	21.1	23.1	15.8
La Crosse, Wis.	20.2	2	22.2	24.2	16.9
Minneapolis, Minn.	20.2	2	22.2	24.2	17.1
Duluth, Minn.	20.5	2	22.5	24.5	17.1
Mankato, Minn.	20.1	2	22.1	24.1	16.9
Des Moines, Iowa	19.5	2	21.5	23.5	16.4
Davenport, Iowa	19.5	2	21.5	23.5	16.4
Sioux City, Iowa	19	2	21	23	16
Mason City, Ia.	19.5	2	21.5	23.5	16.4
St. Louis, Mo.	18.6	2	20.6	22.9	15.5
Kansas City, Mo.	††19.9	2	21.9	23.9	14.8
St. Joseph, Mo.	*19	2	21	23	15.4
Fargo, N. D.	21.9	1	22.9	24.9	19.1
Grand Forks, N. D.	22.2	1	23.2	25.2	19.4
Minot, N. D.	21.9	1	22.9	24.9	19.1
Pierre, S. D.	20.5	3	23.5	25.5	17.6
Huron, S. D.	19.5	3	22.5	24.5	17.6
Wichita, Kans.	17.8	2	19.8	21.8	15.3
Bartlesville, Okla.	17.8	3	20.8	22.8	15.3

†Dumps of 100 or more gallons at 18c per gallon.
*Includes city tax of ½c.
††Includes city tax of 1c.

S. O. NEBRASKA

Crawford, Neb.	20	2	22	*	16.75
Omaha, Neb.	19.25	2	21.25	23.25	16
McCook	20.75	2	22.75	24.75	17.5
Norfolk	19.75	2	21.75	23.75	16.5
North Platte	20.75	2	22.75	24.75	17.25
Scottsbluff	20.25	2	22.25	24.25	16.75

*Standard has no service station here.

CONTINENTAL OIL

Denver, Colo.	19	2	21	21	18
Pueblo, Colo.	19	2	21	23	18
Casper, Wyo.	19	2½	21.5	23.5	16.5
Cheyenne, Wyo.	20	2½	22.5	24.5	18
Butte, Mont.	22	2	24	24	20
Helena, Mont.	24	2	26	28	20.5
Salt Lake City, Utah.	22.5	3½	26	28	19
Boise, Ida.	24	3	27	29	21
Albuquerque, N. M.	22.5	3	25.5	28.5	20

S. O. CALIFORNIA

Phoenix, Ariz.	22	3	25	28	21.5
Los Angeles, Cal.	14.5	2	16.5	20.5	15.5
Fresno, Cal.	16.5	2	18.5	22.5	17.5
San Francisco, Cal.	16	2	18	22	15.5
Reno, Nev.	19.5	4	23.5	27.5	19
Portland, Ore.	16	3	19	23	16.5
Seattle, Wash.	16	2	18	22	16.5
Spokane, Wash.	20	2	22	26	20.5
Tacoma, Wash.	16	2	18	22	16.5

S. O. LOUISIANA

Little Rock, Ark.	16	4	20	23	15
Alexandria, La.	16	2	18	21	15
Baton Rouge, La.	15	2	17	20	13.5
Lake Charles, La.	16.5	2	18.5	21.5	15
New Orleans, La.	*16.5	2	18.5	21.5	14
Shreveport, La.	15	2	17	20	14
Lafayette, La.	16	2	18	21	14.5
Bristol, Tenn.	19.5	3	22.5	25.5	16.5
Chattanooga, Tenn.	19	3	22	25	16.5
Knoxville, Tenn.	19	3	22	25	17
Nashville, Tenn.	18	3	21	24	17
Memphis, Tenn.	17	3	20	23	16

*Includes 1c city tax on gasoline and kerosene.

S. O. OHIO

	Gasoline				Oil
	T.W.	Tax	Total T.W.	S.S.	T.W.
All Ohio points	19	2	21	23	16

MAGNOLIA PETROLEUM

Muskogee, Okla.	15	3	18	21	15
Oklahoma City	15	3	18	21	15
Tulsa, Okla.	16	3	†19	22	15
Fort Smith, Ark.	16	4	20	23	15
Little Rock, Ark.	16	4	20	23	15
Texarkana, Ark*	4	....	20.5		14.5
Dallas, Tex.	**	1	**	19	14
El Paso, Tex.	**	1	**	20	15
Fort Worth, Tex.	**	1	**	19	14
Houston, Tex.	**	1	**	19	14
San Antonio, Tex.	**	1	**	19	14

*Within city of Texarkana, Ark., the state tax on gasoline is 1c per gal. conforming with the Texas state tax. In Texarkana district outside of the city the 4c state tax applies.

†19c to regular power trade, 21c to all other tank wagon consumers.

**Magnolia is maintaining only one price schedule in Texas—its retail schedule. This is in keeping with its new contract which allows the dealer 3c off the retail price, which in common point territory makes the dealer's gasoline price 16c. S. s. price in common point territory through Texas is 19c, effective May 5, and this price applies on all points carried in the above table, excepting El Paso, which is 20c at s. s.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline)

	Oleum Spirits	V.M.&P. Naphtha	Cleaners Naphtha
Chicago	20	22	22
Detroit	21.2	23.7	23.7
Kansas City	20.2	22.2	22.2
Milwaukee	20.2	*24.7	*24.7
Minneapolis	21.5	*26	*26
St. Louis	19.4	21.9	23.2
New York	....	21	....

*Including state tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

ONTARIO

	Gasoline				
	T.W.	Tax	Total	S.S.	T.W.
Toronto	25.5	3	28.5	32	23
Ottawa	25.5	3	28.5	32	23
Cochrane	30.5	3	33.5	42	26.5
Ft. William	28.5	3	31.5	36	24.5

MANITOBA

Winnipeg	28.5	3	31.5	35	24.5

SASKATCHEWAN

Regina	30.5	0	30.5	35	27.5

ALBERTA

Edmonton	31.5	2	33.5	37	28.5
Calgary	29.5	2	31.5	35	26.5

BRITISH COLUMBIA

Vancouver	23	3	26	30	24

Quebec

Montreal	25.5	3	28.5	32	23
Quebec City	27.5	3	30.5	34	25
Three Rivers	27.5	3	30.5	34	25

NEW BRUNSWICK

St. John	28.5	3	31.5	35	26.5
Moncton	28.5	3	31.5	35	26.5

NOVA SCOTIA

Halifax	28.5	3	31.5	35	26
Sydney	30.5	3	33.5	35	26.5

PRINCE EDWARD ISLAND

Charlottetown	28.5	3	31.5	35	26

Note: In districts surrounding these points 1c additional is added to city price.

Gasoline for Export is Firmer, Foreign Buyers Hesitate at New Prices

NEW YORK, May 17.
By Special Correspondent

ON Monday, May 10, the Standard Oil Co., of New Jersey advanced cased gasoline a half cent a gallon. Gasoline was firmer at New York. In the Gulf section some refiners advanced their prices ¼ cent. Export demand for both products was spasmodic. Foreign buyers are reluctant to pay the advances.

White crude scale wax 122-124 A.m.p. is reported to have sold at 5 cents a pound. Pennsylvania cylinder stocks were a trifle firmer. Gas oil is scarce and firmer.

Export Gasoline—New York

A French buyer was inquiring for 45,000 barrels of U. S. Motor and 64-66-375 e.p. gasoline, for June-July shipment but this failed to materialize. At New York, Marcus Hook, Charleston, S. C., and Portsmouth, Va., U. S. Motor was quoted at 13½ cents a gallon, bulk. California gasoline is quoted at 13½ cents a gallon f.o.b., New York harbor.

Inquiries from abroad were scarce and foreign buyers appear to have adopted a waiting policy. Buying has been spasmodic of late. Atlantic seaboard refiners feel that stocks abroad are depleted and Europeans will be forced into the market shortly. Demand for cased gasoline was hand-to-mouth. A Near Eastern buyer purchased 10,000 cases for June shipment.

Export Gasoline—Gulf Ports

A leading Independent is reported to have booked a cargo of 56,000 barrels of U. S. Motor at 11¾ cents and 61-63, 390 e.p. at 13½ cents a gallon for June-July shipment from the Gulf to the United Kingdom. There was an inquiry from France for 45,000 barrels of U. S. Motor and 64-66, 375 e.p. for June-July shipment. Two of the leading Independents are working on this.

As the week closed, U. S. Motor was quoted at from 12 to 12¼ cents a gallon, while 64-66, 375 e.p. was held at 14¾ to 15¼ cents a gallon, in bulk cargoes. For 61-63, 390 e.p. the asking price was 13¾ cents a gallon while 60-62, 400 e.p. was offered at 13½ cents.

Cased gasoline was also higher, U. S. Motor being offered at $2.30 in cargo lots against $2.25 the previous week while 64-66 was held at $2.60 a case, an advance of 10 cents. A leading Independent is rumored to have closed 35,000 cases of U. S. Motor and 64-66 375 e.p. or June shipment to Australasia.

Domestic Gasoline—New York

Demand for gasoline showed a steady gain over the previous week. Jobbing demand has been more active, as a result of the improved weather.

Leading refiners are asking 13½ cents for U. S. Motor in bulk at the refineries and 14½ cents a gallon in tank cars delivered to the trade.

Domestic Gasoline—Gulf Ports

Jobbing demand showed a marked improvement last week. Many of the jobbers who delayed covering their late spring and summer requirements are now in the market. Most of the large refiners were asking 12½ cents a gallon for U. S. Motor in tank cars at the refineries. Tank wagon prices were firm, although no advances were reported.

Export Kerosene—New York

Cased kerosene was advanced ½ cent a gallon on Monday by the Standard Oil Co., of New Jersey, due to the advance in bulk kerosene. Export demand for kerosene was not very active but domestic consumption has been much heavier than anticipated while production has been light. Consequently, prices have been stiffening all along the line. Water white in bulk at local refineries was held at 10½ cents a gallon while prime white was advanced ¼ cent a gallon to 10 cents. Export demand lagged throughout the week.

Cased kerosene demand was a trifle more active than during the previous week. Argentine buyers were in the market for one lot of 20,000 cases and one of 10,000 cases of prime and water white mixed for June shipment.

Export Kerosene—Gulf Ports

Prices were from ¼ to ½ cent a gallon higher than the previous week. The export demand lagged but stocks are depleted, and the advance in the Mid-Continent has forced Gulf prices up. Prime white was offered at from 8¼ to 8½ cents a gallon, in bulk, while water white was held at 9¼ to 9½ cents a gallon, bulk. No foreign inquiries for bulk shipments were reported.

Cased kerosene was advanced 5 cents a case last week by leading Independents. Water white is now held at $1.95 and prime at $1.85 a case in cargo lots. A Chinese buyer was negotiating with a leading Independent for 40,000 cases of prime and water white for July shipment but this did not materialize.

Domestic Kerosene

Domestic demand for kerosene continued active regardless of the warmer weather. Jobbing demand is active. Local oil men attribute the unusually good demand to the cool spring and the large number of kerosene-burning farming machines in use. Water white in tank cars, refineries, was held at 10½ cents, a gallon while prime white was advanced ¼ cent to 10 cents, refineries. Water white in tank cars delivered to the trade was offered at 11½ cents a gallon.

Lubricants—New York

Export demand for lubricating oils was a trifle more active. A French buyer was credited with the purchase of 500 barrels of Pennsylvania cylinder oils for July shipment. These oils were firmer, and 600 s.r. in barrels New York was less freely offered at 22½ cents with most factors asking 22½ to 23 cents a gallon. Neutral oils were very quiet but steady. Paraffin and black oils were dull.

Lubricants—Gulf Ports

A French buyer was inquiring for 35,000 barrels of assorted lubricants for June-July shipment. A leading refiner is rumored to have sold 40,000 barrels of assorted lubes for July shipment to the Continent while a United Kingdom buyer is reported to have purchased 28,000 barrels of Gulf Coast lubes for June-July shipment.

Prices were not disclosed. The tone of the market was much better than during the preceding week, although a little shading was still reported here and there.

Waxes—New York

White crude scale wax was slightly more active. It is reported that 122-124 A.m.p. sold down to 5 cents a pound, although at the close of the week leading factors were still asking 5⅛ cents a pound. Export demand is lagging. The demand from the Continent was still mainly confined to five and 10-ton lots. Leading refiners are shipping large quantities abroad on consignment and consequently Europeans are able to secure their supplies without cabling here.

Fully refined waxes were easier in sympathy with the Gulf market. Domestic demand was hand-to-mouth. No export buying of consequence developed. Fully refined, 120-122 A.m.p. was offered freely at 6 cents while 125-127 A.m.p. was held at 5⅛ cents. Match wax was dull. Semi-refined was in slightly better demand.

Waxes—Gulf Ports

Fully refined waxes were easier. Stocks are slightly larger. Export demand is lagging. Fully refined 123-125 A.m.p. was offered freely at 5⅛ cents a pound while 125-127 was quoted at 5.80 cents. For 128-130 A.m.p. 5.90 cents was quoted while 133-135 was

held at 6¼ and 135-137 at 6⅜ cents a pound. Demand for white crude scale wax was a shade better. White crude 124-126 A.m.p. was held at 5 cents while 125-126 semi-refined was offered at 5.20 cents a pound.

Gas Oil—New York

There was an inquiry from the United Kingdom for 40,000 barrels of gas oil for nearby shipment. It is expected that one of the leading Independents will book this contract. At local refineries, 36-40 is firm at 6½ cents a gallon while 28-34 is held at 5¾ cents a gallon. Local consumption is large while there is considerable gas oil being cracked.

Gas Oil—Gulf Ports

Demand for gas oil was more spirited. A leading Independent is reported to have booked 45,000 barrels of 26-28 transparent for June shipment to the Continent at 5½ cents a gallon, although some reports give the price as 5¼ cents. Offerings have been very small of late. Demand for 32 plus dark gas oil is better and the price is firm at 5 to 5¼ cents a gallon. A German buyer was inquiring for 28,000 barrels for May-June shipment, but this has not materialized as yet.

Bunker Oil—New York

Bunker oil was a trifle easier last week. There is a good demand for bunkering purposes at $1.75 a barrel f.o.b. and $1.81½ f.a.s. New York harbor, but contract demand is lighter. Diesel oil was steady at $2.41½ a barrel, refinery. Export demand for both oils was disappointing. Local stocks about balance the demand.

Bunker Oil—Gulf Ports

Grade C bunker oil is offered for bunkering at $1.60 a barrel f.o.b. New Orleans and $1.45 in cargo lots. There was very little export interest shown and no bulk sales were reported. At Tampico, grade C bunker oil was quoted at $1.50 for bunkering and $1.40 in cargoes, including taxes. Heavy Panuco crude oil was held at $1.20 taxes to be added but this price was largely nominal owing to scarcity of offerings.

British Importations

During the week ended April 19 there were 55,389,044 gallons of petroleum imported into the United Kingdom. Larger receipts were:

Consignee	Imperial Gallons	Product	Port of Origin
London:—			
Glico Pet. Co....	207,889	Benzine	Constantza
W. H. Brown....	170,846	Gasoline	N. Orleans
To Order.....	601,720	Lubes	P. Mexico
Glico Pet. Co....	468,440	Kerosene	Constantza
Russian Oil Prod.	613,511	Gasoline	Novoross'k
Russian Oil Prod.	1,249,540	Gasoline	Batown
Swansea:—			
Nat'l Oil Ref....	2,417,512	Crude dist	Abadan
Nat'l Oil Ref....	2,438,265	Crude	Abadan
Nat'l Oil Ref....	2,690,844	Crude	Abadan
Nat'l Oil Ref....	2,412,950	Crude	Abadan
Nat'l Oil Ref....	2,461,934	Crude	Abadan
Nat'l Oil Ref....	1,551,995	Crude	Abadan
Grangemouth:—			
United Oil Imp..	541,800	Gasoline	N. O.
Scottish Oils....	2,453,052	Crude	Abadan

Complete Export Markets

New York Export Market

GASOLINE	May 17	May 10
U. S. Motor Tank cars Ref.....	13½	-13½
U. S. Motor cases.....	28.90	-28.90
California grade U. S. Motor F. O. B. N. Y. Bulk.....	13½	-13½
KEROSENE		
41-43-150 W. W. Tank cars Ref..	10½	-10½
41-43-150 W. W. Cases.....	20.15	-19.65
42-44-110 S. W. Cases.....	18.90	-18.40
GAS OIL		
36-40, Bulk Refinery.....	-06½	-06½
28-34, Bulf Refinery.....	-05¾	-05¾
MEXICAN BUNKER OIL		
Grade C, f. o. b. ref. Bulk.....	1.75	- 1.75
Diesel Oil f. o. b. ref. Bulk.....	2.41½	- 2.41½
LUBRICATING OILS		

The following prices are cooperage basis f. o. b. New York, products being manufactured by inland refineries.

CYLINDER OILS (Bbls.)		
1 inch Immersion Test; All Penna. Products		
Filtered D 600.....	29½	-29½
Filtered E 600.....	28	-28
Unfiltered 600 s. r.....	22 -22½	-22
Unfiltered 650 s. r.....	28¾-29	-28½
600 flash s. r.....	29 -30	-29
630 Flash.....	41	-41
RED PARAFFIN (Bbls.)		
(Viscosity at 70)		
300 vis.....No. 5 color	21	-21
250 vis.....No. 5 color	20	-20
High Viscosity.....No. 5 color	25	-25
NEUTRAL OILS (Bbls.)		
(Viscosity at 70)		
200 vis. at F. Pale...No. 3 color	-31	-31
180 Pale.....No. 3 color	-29	-29
150 Pale.....No. 3 color	-24½	-24½
BLACK OIL (Bbls.)		
25-30 cold test.....	13	-13
15 cold test.....	14¾	-14¾

MEDICINAL OILS (Includes Price of Drums) (Penna. Stocks)	May 17	May 10
Domestic 875-.885 s. g.....	-1.10	1.00-1.08
Domestic 865-.870 s. g.....	.85- .90	.75- .80
Russian 885-.890 s. g. 325-330 vis.....	1.10-1.25	1.20-1.25
WAXES		
(Penna. Stocks) (F. A. S. Carload Lots)		
WHITE CRUDE SCALE		
122-124 A. m. p.....	-05¾	-05¾
124-126 A. m. p.....	-05¾	-05¾
MATCH		
105-108 A. m. p.....	-06	-06
FULLY REFINED		
120-122 A. m. p.....	-06	-06
123-125 A. m. p. Philadelphia..	-06	-06
125-127 A. m. p.....	-06¼	-06¼
128-130 A. m. p.....	-06¼	-06¼
130-132 A. m. p.....	-06¾	-06¾
133-135 A. m. p.....	-06¾	-06¾
135-137 A. m. p.....	-06¾ 07	-06¾-07
SEMI REFINED		
122-124 A. m. p.....	-05¾	-05¾
YELLOW CRUDE SCALE		
124-126 A. m. p.....	-05	-05

PETROLATUMS (Penna. Stocks) Per Pound		
Dark Green.....	03	03
Veterinary.....	03¼	03¼
Light Amber.....	03¼	03¼
Dark Amber.....	03¼	03¼
Cream.....	06½-06¾	06¾
Lily White.....	08¼-08½	08½
Snow White.....	11 -11⅜	11⅜-11½

Gulf Export Market

GASOLINE F. O. B. Seaboard Shipments of 20,000 Bbls. and over	May 17	May 10
U. S. Motor, Cargo.....	12 -12½	-.12
60-62 400 e. p. Bulk.....	13¼	-.13¾
64-66 375 e. p. Bulk.....	14¾-15¼	-.15
U. S. Motor, Cases (cargo lots)	2.30	2.25
64-66, Cases (cargo lots).....	2.60	2.50
KEROSENE		
Water White, 41-43 bulk....	09¼-09½	-09
Prime White, 42-44 bulk....	08¼-08½	-08
Water White, cases (cargo lots)	1.95	-1.90
Prime White, cases (cargo lots)	1.85	.1.80
DOMESTIC GAS AND BUNKER OIL		
26-28, gravity, bulk*.....	05¼-05½	05¼-05½
32 plus, bulk, Dark.....	05	-05
Grade C, Bunker oil.....	1.60	-1.60
Cargoes.....	1.45	-1.45

*Transparent through neck of a 4 oz. bottle.

MEXICAN CRUDE AND BUNKER OILS F. O. B. Steamer Tampico		
Heavy, Taxes to be added.....	nom.	-1.20
Grade C, Bunker oil Taxes paid.....	1.40-1.45	1.40-1.45
Grade C, Bunker oil F. O. B. New Orleans.....	1.55	-1.55

SOUTH TEXAS (Viscosity at 100°F; cold test 0) (Tanker, F. O. B. Houston)		
*LUBRICATING OILS	May 17	May 10
160 Vis. No. 2 Unfiltered Pale....	07	07
150 Vis. No. 2½ Unfiltered Pale..	09¼	09
200 Vis. No. 3 Unfiltered Pale....	11	11
300 Vis. No. 3 Unfiltered Pale....	13½	13
500 Vis. No. 3½ Unfiltered Pale..	15½	12
200 Vis. No. 5½ Red Oil.....	11	11
300 Vis. No. 5½ Red Oil.....	12¼	12
500 Vis. No. 6 Red Oil.....	13½	13½
800 Vis. No. 6 Red Oil.....	17	16

*These prices are entirely nominal owing to wide fluctuations.

Pacific Export Market

(Cargo lots quotations at seaboard, Los Angeles)

	May 17	May 10
Gasoline, U. S. Motor— 54°-56°.....	11 -11¼	11 -11¼
Gasoline, U. S. Motor— blends and special cuts....	11¼-11½	11¼-11½
Gas Oil, 24°—30°B. per bbl.....	$1.15	$1.15
Diesel Oil, 27°B—plus per bbl.....	$1.15	$1.15
Bunker Oil, 14°—18°B. per bbl.....	$1.00	$1.00
Fuel Oil, 14°—18°B. per bbl.....	$1.00	$1.00
Kerosene, W. W. 40°—42° B per gal., 125-150 flash test.....	05¾-06¼	.05¾-.06¼
Cased Goods		
Gasoline, U. S. Motor.....	$2.55	$2.55
Kerosene, W. W. 38°—40° B per case, flash test 125-150.....	$1.50-1.55	$1.50-1.55

N. Y. Domestic Market

The following light oil, gas and fuel oil prices are F. O. B. New York refineries, being products made from Domestic (including California) and Mexican Crudes.

	May 17	May 10
U. S. Motor Gasoline, Tank Cars Delivered greater N. Y..	-14½	-14½
U. S. Motor Gasoline, Tank Cars Bayonne.....	-13½	-13½
U. S. Motor, Tank Cars, *Atlantic Seaboard Terminals	-13½	-13½
Kerosene, 41-43 150 W. W. Tank Cars De'd greater N.Y..	-11½	-.11½
Grade C Bunker f.o.b. N.Y. Ref.	1.75	1.75
Diesel Oil f. o. b. Refinery....	2.41½	2.41½
Gas Oil, 36-40, Bulk Refinery..	-06½	-06½
Gas Oil 28-34 Bulk, Refinery...	-05¾	-05¾

*New York, Philadelphia, Portsmouth, Va. Charleston, S. C.

Crude Oil Prices All Fields

PRICES IN EFFECT, *May 17*

EASTERN FIELDS

Posted by Joseph Seep Purchasing Agency

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$3.65
Bradford District Oil in National Transit Lines (Bradford District)	3.65
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	3.55
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	3.55
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	3.50
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	3.30
Keister Grade in National Transit Lines (Butler Co.)	2.45
Gaines, Tioga Co. (Pa.)	3.10
Cabell Grade in Eureka Pipe Lines (West Virginia)	2.40
Corning Grade in Buckeye Pipe Lines (Ohio)	2.35
*Somerest Medium in Cumberland Pipe Lines (Kentucky)	2.50
*Somerset Light in Cumberland Pipe Lines (Kentucky)	2.65
Ragland Grade in Cumberland Pipe Lines (Kentucky)	1.15

*Somerset oil run prior to Oct. 1, 1923, takes price of 6 cents lower than above quotations.

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Wooster	$2.55	Illinois	$2.37
Lima	2.48	Plymouth	1.90
Waterloo	1.35	*Canadian Petrolia	2.88
Indiana	2.25	*Posted by Imperial Oil, Ltd.	
Princeton	2.37		

OKLAHOMA, KANSAS And NORTH TEXAS FIELDS

(Prices of Prairie Oil & Gas Co.)
(Prairie's prices apply in Oklahoma, Kansas, North and Central Texas)

28-28.9	$1.65	41-41.9	$2.69
29-29.9	1.73	42-42.9	2.77
30-30.9	1.81	43-43.9	2.85
31-31.9	1.89	44-44.9	2.93
32-32.9	1.97	45-45.9	3.01
33-33.9	2.05	46-46.9	3.09
34-34.9	2.13	47-47.9	3.17
35-35.9	2.21	48-48.9	3.25
36-36.9	2.29	49-49.9	3.33
37-37.9	2.37	50-50.9	3.41
38-38.9	2.45	51-51.9	3.49
39-39.9	2.53	52 and above	3.57
40-40.9	2.61		

Effective May 15, The Texas Co. posted same gravity and price schedule as Prairie in Oklahoma, Kansas, North, North Central and Central Texas fields.

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie and Moran crudes all in Texas.)

Effective May 15, Humble posted same gravity and price schedule in all the above fields as that posted by Prairie, excepting that Humble is paying 8c less for each full degree below 28 gravity.

Mirando, Tex	$1.25

Magnolia Petroleum Co. Prices In Oklahoma, Kansas and North Texas

Effective May 15, Magnolia posted same gravity and price schedule as Prairie, in all fields where it purchases on a gravity basis, excepting that it is paying $1.30 for all oil below 28 gravity.

Effective May 15, Corsicana heavy was advanced to $1.25 per barrel.

NORTH LOUISIANA—ARKANSAS FIELDS

***Prices of the Standard Oil Co. of Louisiana**

Caddo, below 32	$1.85
" below 32-34.9	2.00
" 35-37.9	2.10
" 38 and above	2.20
Homer, below 31	1.60
" 31-32.9	1.75
" 33-34.9	1.85
" 35 and above	1.95
Haynesville, below 33	1.75
" 33 and above	1.85
El Dorado, including Lisbon below 33	1.75
" 33-34.9	1.85
" 35-36.9	1.95
" 37 and above	2.05
Bull Bayou, 32-34.9	1.70
" 35-37.9	1.85
" 38 and above	2.00
Smackover, below 24	1.00
" 24-24.9	1.25
" 25-25.9	1.30
" 26-26.9	1.35
" 27 and above	1.40
De Soto	2.05
Crichton	1.85
Bellevue	1.50
Cotton Valley	1.10
**Urania, La	1.30

*Same prices maintained by The Texas Co., Gulf Refining Co. of Louisiana and Louisiana Oil Refining Corp. All purchasers of Smackover have maintained since Feb. 1 and 2, the same gravity and price schedule as Standard. Gulf is paying 95c for Calion (East El Dorado Crude.)

**Posted by Louisiana Oil Refining Corp.

STEPHENS, ARKANSAS

Posted by Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

26 and above	$1.50	Below 26	$1.30

GULF COASTAL FIELDS

Posted by Humble Oil & Refining Co.

Grades A	$1.60	29-29.9	$1.75
Grades B:		30-30.9	1.80
Below 25	1.50	31-31.9	1.85
25-25.9	1.55	32-32 9	1.90
26-26.9	1.60	33-33.9	1.95
27-27.9	1.65	34-34.9	2.00
28-28.9	1.70	35 and above	2.05

Humble is paying the above prices in Goose Creek, Hull, Liberty, West Columbia, Orange and Pierce Junction fields. All other Gulf Coastal crudes are classified as A grades only. Other major purchasers are The Texas Co., Gulf Production Co., Sun Oil Co., and Sinclair Crude Oil Purchasing Co.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co. and Midwest Refining Co.

†Salt Creek 29-29.9	$1.73
Salt Creek 30-30.9	1.81
Salt Creek 31-31.9	1.89
Salt Creek 32-32.9	1.97
Salt Creek 33-33.9	2.05
Salt Creek 34-34.9	2.13
Salt Creek 35-35.9	2.21
Salt Creek 36-36.9	2.29
Salt Creek 37 and above	2.37
Elk Basin	2.40
Grass Creek light	2.40
Big Muddy	2.25
Lance Creek	2.40
Rock Creek	2.25
†Osage	2.40
†Cat Creek, Mont	2.40
Sunburst, Mont	1.05
†Hogback, N. Mex	2.45
Artesia, N. Mex	2.20

†Posted by Midwest Refining Co. Midwest also buys Grass Creek light, and Elk Basin.

The Texas Co. buys Salt Creek and Big Muddy crude.

CALIFORNIA

Standard Oil Co. of California

Santa Maria and Ventura Posted by *Union Oil Co.

Gravity	Signal Hill Huntington Beach	Ingle-wood Torrance	Newhall, McKittrick, Whittier La Habra	Kern River	Olinda-Brea Canon, Richfield	Athens-Rosecrans Dominguez	Monte-bello	Coyote Hills	Santa Fe Springs	Midway-Sunset Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria	Ventura
14-14.9	$ .85	$ .85	$ .85	$ .75	$ .85	.....	$ .85	$ .85	.....	$ .75	$ .75	$ .75	$ .75	$ .85	$ .85
15-15.9	.87	.87	.85	.75	.87	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
16-16.9	.90	.90	.85	.75	.90	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
17-17.9	.94	.94	.85	.75	.94	.....	.85	.85	.....	.75	.75	.75	.75	.85	.85
18-18.9	.98	.98	.86	.75	.98	.....	.86	.86	.....	.75	.75	.75	.75	.85	.85
19-19.9	1.04	1.04	.87	.75	1.04	.....	.87	.87	.....	.75	.75	.75	.75	.85	.85
20-20.9	1.10	1.10	.89	.....	1.10	.....	.89	.90	.....	.82	.82	.79	.78	.90	.90
21-21.9	1.16	1.16	.91	.....	1.16	.....	.91	.98	.....	.90	.90	.86	.81	.97	.97
22-22.9	1.22	1.22	.94	.....	1.22	.....	.94	1.06	.....	1.00	1.00	.93	.85	1.04	1.04
23-23.9	1.28	1.28	.....	.....	1.28	.....	.97	1.14	.....	1.11	1.11	1.00	.89	1.11	1.11
24-24.9	1.34	1.34	.....	.....	1.34	$1.34	1.01	1.22	1.02	1.22	1.22	1.07	.93	1.18	1.18
25-25.9	1.40	1.40	.....	.....	1.40	1.40	1.05	1.30	1.08	1.33	1.33	1.14	.97	1.25	1.25
26-26.9	1.46	1.46	.....	.....	1.46	1.46	1.09	1.38	1.16	1.44	1.44	1.21	1.01	1.32	1.32
27-27.9	1.52	1.52	.....	.....	1.52	1.52	1.13	1.46	1.24	1.55	1.55	1.28	1.05	1.39	1.39
28-28.9	1.58	1.58	.....	.....	1.58	1.58	1.17	1.54	1.32	1.66	1.66	1.35	.....	1.46	1.46
29-29.9	1.64	.....	.....	.....	1.64	1.64	1.21	1.62	1.40	1.77	1.77	1.42	.....	1.53	1.53
30-30.9	1.70	.....	.....	.....	1.70	1.70	1.25	1.70	1.48	1.88	1.88	1.49	.....	1.60	1.60
31-31.9	1.76	.....	.....	.....	.....	1.76	.....	.....	1.60	1.99	1.99	1.56	.....	.....	1.67
32-32.9	1.84	.....	.....	.....	.....	1.84	.....	.....	1.72	2.10	2.10	1.63	.....	.....	1.73
33-33.9	.....	.....	.....	.....	.....	1.92	.....	.....	1.84	2.21	2.21	1.70	.....	.....	1.79
34-34.9	.....	.....	.....	.....	.....	2.00	.....	.....	1.96	.....	2.32	1.77	.....	.....	1.85
35-35.9	.....	.....	.....	.....	.....	2.08	.....	.....	2.08	.....	.....	1.84	.....	.....	1.92
36-36.9	.....	.....	.....	.....	.....	2.16	.....	.....	2.16	.....	.....	.....	.....		
37-37.9	.....	.....	.....	.....	.....	2.24	.....	.....	2.24	.....	.....	.....	.....		
38-38.9	.....	.....	.....	.....	.....	2.34	.....	.....	2.34	.....	.....	.....	.....		
39-39.9	.....	.....	.....	.....	.....	2.44	.....	.....	2.44	.....	.....	.....	.....		
40-40.9	.....	.....	.....	.....	.....	2.54	.....	.....	.....	.....	.....	.....	.....		
41-41.9	.....	.....	.....	.....	.....	2.64	.....	.....	.....	.....	.....	.....	.....		
42-42.9	.....	.....	.....	.....	.....	2.74	.....	.....	.....	.....	.....	.....	.....		

*Union Oil Co. also purchases Long Beach crude and is maintaining the same gravity and price schedule in that field as the Standard maintains in Signal Hill and Huntington Beach fields. The Union also buys and pays the same prices as the Standard in the Rosecrans-Dominguez fields, on gravities ranging from 14 degrees to and including 24.9 degrees; and in Santa Fe Springs, on gravities ranging from 20 to and including 23.9 degrees.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are the average market prices for the week on materials used by refiners and compounders f. o. b. shipping point as effective this date.

Refiners' Supplies

	May 17	May 10
Soda Ash light 58% bags.cwt.	-$1.38	-$1.38
Silicate of Soda 60 deg. drums.....cwt.	- 1.65	- 1.65
Sal Soda wks.....1.10-	1.25	1.10- 1.25
Caustic Soda 70% solid..cwt.	- 3.10	- 3.10
Chloride of Lime.....cwt. works.....	- 2.00	- 2.00
Sulphuric Acid 60 deg. tank cars f. o. b. shipping point.....per ton	10.00-11.00	-10.00
Liquid Chlorine tank cars works.....lb.	- .04	- .04

Compounders' Supplies (Open Market)

Vegetable Oils—		
Linseed carloads spot.....lb.	10.8	10.8
May.....	10.8	10.8
Tanks, spot.....	09.8	09.8
Boiled carloads spot.....lb.	09.9	09.9
*Soya Bean spot, Bbls....lb.	13¼	13½
Animal Oils—		
English Degras.....lb.	.05½	-.05½
Domestic Degras, bbls., carloads.....lb.	-.04¾	-.04¾
*Horse.....lb.	-.09½	-.09½
Oleic Acid—		
Dist. Bbls.....lb..10	-.10½	.10¾-.11
Saponified Bbls.....lb..10½	-.11	.11 -.11¼
Castor Oil—		
No. 1 Carlots, Bbls.....	-.13¼	-.13¼
No. 3 Carlots, Bbls.....	-.12¾	-.12¾
Lard Oils—		
Prime Winter Strained. to 1½ffa.40/45c.t.lb.	.17¼	.17
Extra Winter Strained. 2 to 4½ffa.40/45c.t.lb.	.14	.13½
Extra..... 4 to 5 ffa.40/45c.t.lb.	.13	.13
Extra No.1 7 to 10 ffa.40/50c.t.lb.	.12½	.12½
No. 1.....15 to 18 ffa.40/45c.t.lb.	.12¼	.12¼
No. 2.....22 to 25 ffa.40/45c.t.lb.	.12	.12
Prime Edible Tallow under 1¼ffa. 40/45c.t.N.Y.....lb..09¼	-.09½	-.09½
Tallow acidless.....lb.	-.11¼	-.11¼
Lard Stearine.....lb.	nominal	nominal
Oleo Stearine.....lb.	-.13	-.12
Neatsfoot Oil—		
Pure.....bbls.-lb.		.16¼ .16½
Extra.....do lb.		.12½ .12½
No. 1.....bbls.-lb.		.12¼ .12¼
Cold pressed.....lb.		-18¾ .19¼
Fish Oils—		
Menhaden Oil Light pressed.....gal.	-.65	-.65
White.....gal.	- 67	-.67
Yellow bleached .....gal.	-.70	-.70
*Herring tank cars coast.....gal.	-.50	-.50
Whale, extra winter bleached.....gal.	-.82	-.82
Seal.....gal.		Nominal
Naval Stores—		
Turpentine, N. Y.....gal.	.90	.83
Turpentine†.....gal.	.83½	.76
Rosin, B. N. Y.....bbl.	9.50	7.50
Rosin, F. N. Y.....bbl.	11.75	10.75
Rosin, B†.....bbl.	8.00	6.00
Rosin, F†.....bbl.	10.25	9.25
Rosin Oil 1st run.....gal.	.59	.45
Rosin Oil 2nd run.....gal.	.64	.50
Pine Tar—		
Kiln Burnt.....bbl.	14.50	14.50
Retort.....bbl.	15.50	15.50
Alcohol—Denatured Formula 5		
Bbls.....gal.	.34	-30
Drums.....gal.	-28	-25

†Savannah, Ga. market.
*Nominal.

Sulfuric Acid Going Up, Chlorine Is Firm

By Special Correspondent

NEW YORK, May 17.—Following is a review of the markets for oils and chemicals used in compounding and refining:—

Alcohol much firmer. Denatured tending higher. Offerings more restricted. Production falling. Demand slightly heavier. Wood alcohol dull and unchanged.

Sulfuric Acid firmer, and tending higher due to advance in sulfur. Demand more active. Offerings lighter.

Bleaching Powder steady. Movement chiefly against contracts. Spot demand is lagging.

Soda Ash steadier. Demand slightly better. More interest in futures. Export demand better.

Sal Soda demand fair but activity chiefly in futures. Consumption slightly larger. Prices steady.

Caustic Soda quiet. Spot goods dull. Fair movement in futures. Export inquiry more active.

Linseed Oil dull and easier reflecting trend in flaxseed. Paint makers buying in slightly larger quantities but linoleum makers holding off. Jobbing demand disappointing. Soya bean oil quiet. 10 cents pound, tanks, coast.

Naval Stores weaker. Rosin declining due to slump in demand from Great Britain. Stocks larger. Turpentine movement also disappointing. Rosin oil steady but quiet. Tar and pitch demand routine.

Fish Oils steady. Crude menhaden oil still nominal. Light pressed in better demand. Domestic cod oil quiet 58 to 60 cents, gallon, barrels, New York. Whale oil marking time.

Liquid Chlorine firm 4 cents, pound, tanks works. Demand slightly more active.

Higher Benzol Expected

NEW YORK, May 17.—Consumption of motor benzol continues to soar and the price is firmly held at 24 cents a gallon in tank cars at the ovens. Many observers are predicting higher prices soon. Motor fuel mixture makers are taking large quantities on contract while others are anxious to buy for their summer requirements.

Production is on the decline, and the recent advance in pure and 90 per cent is partly responsible for the upward tendency in motor benzol. Export demand is gaining although marketers have little on hand to supply foreign requirements.

California Refiners Buy Eastern Naturals

LOS ANGELES, May 14.—Although California producers of natural gasoline are able to sell all of their output at present prices, Oklahoma casinghead is finding a market in California. Recently one of the larger Independents brought two trainloads of the Mid- Continent material to its Bakersfield refinery at a cost below California casinghead delivered. It is understood other consignments are on the way. The cost of transportation, including shrinkage and insurance, to haul casinghead from Oklahoma to the West coast is approximately 7 cents. Hence the Oklahoma price to the buyer must be 9 cents or better at the plant to induce California refiners to buy.

Recent shipments of finished California gasoline to the East coast have been below average. The total shipments for the month of April were less than 500,000 barrels. There was but one shipment of 76,000 barrels consigned to the Pan American Petroleum Co., at Baltimore in the first week in May. Exports of finished gasoline have increased this month. About 250,000 barrels were sent to England, Germany and Canada.

Demand for gasoline here is growing rapidly. Automobile registrations are 15 per cent larger in Pacific Coast states than a year ago. Refiners expect that before the end of the season some difficulty may be experienced in meeting demand easily. Present stocks are adequate to meet the situation but continued heavy drafts upon them by unlooked for foreign demands may seriously decrease them.

Fuel oil is steadily gaining strength. The volume of lube sales is increasing and prices are stiffening. Kerosene has softened. The China market for cased kerosene is said to be flooded.

Eastern and Central Kentucky Markets

LEXINGTON AND ASHLAND, KY., May 17.—Kentucky refiners are optomistic over prospects of increased business gradually taking form. Gasolines have advanced from ¾ to 1¼ cent over last week's quotations. Kerosene is unobtainable in the eastern district and very little available in the central section. Today's prices are:

	Eastern	Central
58-60	14¾	14¼
60-62	15¼	15
64-66	15¾	15¾
68-70	16	
41-43 w.w. kerosene		
24-26 fuel oil	5⅛	5⅛
Gas oil	6¾	6

OIL STOCKS AND FINANCES

National Petroleum News

Improved Earnings by Barnsdall Is Continuing This Year

Staff Special
CLEVELAND, May 17

IMPROVEMENT in earnings of the Barnsdall Corp. and subsidiaries which resulted last year in the resumption of dividend payments, is continuing this year. The corporation for the first quarter of 1926 reports gross earnings amounting to half the 1925 gross, and net income for the quarter is almost 45 per cent of net for all of 1925. The earnings, gross and net, were more than double gross and net for the first quarter of last year. Income accounts for the two quarters compare:

	1926	1925
Gross earnings	$7,030,025	$3,222,285
Expenses	4,332,727	2,141,922
Operating income	$2,697,298	$1,080,363
Other income	14,275	3,077
Total	$2,711,573	$1,083,440
Int. & fed. taxes	551,179	199,874
Depr. & depl.	795,536	333,416
Net inc.	$1,364,858	$ 550,150

The net income in the first three months of this year were equivalent to $1.18 per $25 share on the 1,148,536 shares outstanding, compared with 77 cents a share on 708,536 shares outstanding a year before.

Last year Barnsdall and subsidiaries netted $3.29 per $25 share on 928,168 shares outstanding at the end of the year, compared with $1.77 a share on 708,536 shares outstanding in 1924.

The corporation in 1925 disposed of the Potter Gas Co. and the Dempseytown Gas Co., both operating in Pennsylvania gas fields, and acquired for $25,000,000 the Waite Phillips Co., a Mid-Continent integrated company.

Production of oil and other materials by Barnsdall subsidiaries 1925 and 1924 compare:

	1925	1924
Nat. gas M. cu ft.	2,849,699	2,971,287
Crude oil, net bbls.	3,071,821	2,171,147
Casinghead, gals.	3,203,809	1,860,272
Refined oils, gals.	57,851,942	51,687,934
Zinc concentrates, tons	20,235	13,376
Tripoli products, tons	11,508	9,578
Silver bullion, oz.	377,772	391,384

On Dec. 31, 1925, Barnsdall subsidiaries were operating 65,775 acres of oil lands and held 61,105 acres additional. Operated and unoperated acreage at the end of 1924 stood at 87,555 and 144,730, respectively. The shrinkage was due mostly to disposal of the Pennsylvania and New York gas properties and the abandonment of acreage held in Arkansas.

On Dec. 31 the subsidiaries were operating 2620 oil wells and 48 gas wells, compared with 2629 oil wells, 688 gas wells and 93 combined gas and oil wells on Dec. 31, 1924. The wells before giving effect to the Phillips purchase, on at the end of 1925 were distributed as follows:

	Oil	Gas
California	79	..
Indiana	11	..
Illinois	37	..
Kansas	....	1
Oklahoma	1,602	18
Ohio	193	5
Pennsylvania	315	8
Texas	110	..
West Virginia	273	16
Total	2,620	48

Barnsdall subsidiaries completed 75 wells last year of which 65 were oil, three gas, and seven dry. The average oil production for the year was 8416 barrels daily compared with 5932 in 1924.

On Dec. 31 current assets were $4,060,878 and current liabilities $1,887,184, leaving net working capital of $2,173,694, compared with $640,303 on Dec. 31, 1924. Funded debt was reduced during the year by more than $2,000,000.

White Eagle Net Lower

CLEVELAND, May 17.—Lower net income is reported by White Eagle Oil & Refining Co. for the first quarter of 1926 compared with the first quarter of 1925, due probably to increased costs because net sales were larger this year. Comparative statement of income for the first quarters of the two years before reserves for depreciation, depletion and federal income taxes, follow:

	1926	1925
Net sales	$3,220,629	$2,912,726
operations	437,524	834,369
Profit from	....	....
Miscel. income	65,837	80,490
Toal income	$ 503,361	$ 914,559
Miscel. charges	86,446	102,006
Net income	$ 416,915	$ 812,853

Barnsdall Corp. and Subsidiaries Consolidated Income Accounts

	1925	1924	1923	1922	1921
Gross sales	$14,792,300	$10,209,274	$ 9,288,885	$ 9,276,646	$ 8,304,090
Operating expenses	9,512,021	7,293,340	7,122,565	6,473,599	5,651,381
Operating income	$ 5,280,279	$ 2,915,934	$ 2,166,320	$ 2,803,047	$ 2,652,709
Other income	72,408	252,582	43,728	72,723	139,206
Total income	$ 5,352,687	$ 3,168,516	$ 2,210,048	$ 2,875,770	$ 2,791,915
Interest, deprec. etc.	2,145,520	1,888,075	1,963,537	2,579,416	2,736,765
Federal taxes	113,165	24,533	64,663	36,229	....
Net income	$ 3,094,002	$ 1,255,908	$ 181,848	$ 260,125	$ 55,150

Barnsdall Corp. and Subsidiaries' Consolidated Balance Sheets as of Dec. 31

	1925	1924	1923	1922	1921
ASSETS					
Property*	$31,952,760	$33,715,328	$33,357,048	$34,205,885	$33,741,069
Investments in advances to affiliated companies	1,201,710	632,820	806,372	1,023,986	1,041,690
Sinking fund	2,596,667	96,667	95,161	178,333	188,405
Treasury stock	430,400	347,800	353,800	158,750	573,050
Cash	1,512,725	673,677	690,315	731,178	972,600
Bills, accounts receivable	953,727	762,289	686,864	942,412	830,266
Employe's stock subs. rects.	....	....	....	....	24,678
Inventories	1,591,483	1,533,503	1,322,008	1,367,671	1,524,450
U. S. securities	2,941	4,940	69,941	93,410	315,908
Deferred charges	150,824	121,248	164,825	127,172	227,333
Total	$40,393,238	$37,888,272	$37,546,334	$38,828,797	$39,439,449
LIABILITIES					
Class A stock	$19,490,800	$14,000,000	$14,000,000	$13,000,000	$13,000,000
Class B stock	3,713,400	3,713,400	3,713,400	3,713,400	3,713,400
Stocks of subs. held by public	952,249	2,109,132	2,529,333	3,514,753	2,514,753
Advance sales	170,848	450,200	....	....	....
Funded debt	3,925,500	6,408,200	7,854,100	9,189,200	10,612,800
Payment rec'd on contracts	....	500,625	....	....	....
Bills payable	772,645	1,790,548	1,535,120	1,649,850	1,441,347
Accounts payable	472,421	453,245	523,081	504,864	584,203
Dividends payable	455,476	....	....	....	....
Purchase money oblig.	....	....	....	....	10,100
Accruals	186,641	90,315	140,386	81,056	188,961
Surplus	†10,253,257	8,372,607	7,250,914	7,175,674	7,373,885
Total	$40,393,238	$37,888,272	$37,546,334	$38,828,797	$39,439,449

*After depreciation and depletion.
†Includes $184,647 applicable to minority holdings in subsidiaries.

Transactions In Oil Shares on New York Stock Exchange

1925 High	1925 Low	1926 High	1926 Low		Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended May 15 Sales	First	High	Low	Last	Ch'ge
.....	.....	26¼	24½	(sh)	713,000	N.P.	Amerada Corp.	40cQ	Apr. 30, 26	5,700	25¼	25½	24½	24¾	— ¾
79¾	48	74	63	(sh)	200,000	N.P.	American Republics	.....	.....	.....	.....	.....	.....	.....	.....
47¾	32	59½	44¾	$	56,000,000	$25	Associated Oil	50cQ	Apr. 26, 26	800	51½	53	51½	52	+ ⅜
117½	95½	120¾	97		50,000,000	100	Atlantic Refining	.....	June 16, 24	12,100	114	117¾	114	116	— ½
117¾	113½	117½	115¾		20,000,000	100	do pfd	$1¾Q	May 1, 26	.....	.....	.....	.....	.....	.....
33½	18¾	33½	24⅜		25,000,000	25	Barnsdall Corp. A	50cQ	Apr. 2, 26	22,800	25⅝	25⅝	24½	24½	—1⅜
30	16	29¼	23¼		3,713,275	25	do B	50cQ	Apr. 2, 26	.....	.....	.....	.....	.....	.....
34⅜	23⅞	38⅛	30⅝	$	45,040,125	$25	California Petroleum	50cQ	Mar. 1, 26	15,800	33	33⅜	32	32½	— ¼
70	42½	73	50		23,542,500	100	General Asphalt	.....	.....	19,300	62⅞	64¼	60⅝	62½	— ¾
109	86½	114¾	94⅞		7,416,000	100	do pfd	$1¾Q	Mar. 1, 26	600	103	103	x102	102	—2½
59⅛	42	65¾	49½		29,429,550	25	General Petroleum	75cQ	Mar. 15, 26	40,800	59⅞	61⅝	59⅝	61⅝	+2⅜
85	59	72	50¼		25,000,000	100	Houston Oil	.....	.....	700	58⅝	59	57	57	—1¾
41¾	13½	34	19⅝	(sh)	500,000	N.P.	Independent Oil & Gas	25cQ	Apr. 12, 26	10,200	24⅛	25	23⅛	24⅛	+ ⅛
14½	5½	13¾	9	$	3,204,590	$10	Indian Refining	.....	Dec. 15, 20	1,900	9⅞	10	9⅜	9⅜	— ⅜
12⅜	6	12½	8		4,545,860	10	do ctfs	.....	.....	300	8⅜	9	8⅜	9	— ⅞
110	77	104	90¼		2,296,400	100	do pfd	.....	Dec. 15, 21	100	90	90	90	90	— ¼
1½	¾	¾	¾		1,678,760	10	Kansas & Gulf	.....	.....	500	¼	¼	¼	¼	0
.....	.....	.....	.....	(sh)	4,000,000	N.P.	Lago Oil & Transport	.....	.....	.....	.....	.....	.....	.....	.....
23¾	13⅜	19⅝	12	(sh)	1,131,216	N.P.	Louisiana Oil Refining	.....	.....	4,600	14	14⅞	13¾	14⅞	+ ⅛
85½	20⅜	28⅞	20¾	(sh)	330,000	N.P.	Maracaibo Oil	.....	.....	1,200	22	22½	21⅝	21⅝	— ⅞
60½	32⅝	60¾	49¼	(sh)	1,895,823	N.P.	Marland Oil Co	$1Q	Mar. 31, 26	38,500	54⅜	57	53¾	56⅜	+2⅛
250	225	.....	.....	$	45,942,800	$100	Mexican Petroleum	$3Q	Apr. 20, 26	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....		12,000,000	100	do pfd	$2Q	Apr. 20, 26	.....	.....	.....	.....	.....	.....
22½	29	12⅜	6	(sh)	945,939	N.P.	Mexican Seaboard	.....	Nov. 15, 24	2,100	7¾	7¾	7¼	7½	+ ¼
38	25¾	37	28	(sh)	1,357,800	N.P.	Mid-Continent Petroleum	.....	Aug. 1, 23	12,400	30½	30⅞	30	30⅝	— ⅜
94¼	83	98	90	$	6,718,000	$100	do pfd	$1¾Q	Mar. 1, 26	200	97¼	98	x97¼	97¼	—1½
3¼	⅝	2½	1¼		25,415,540	10	Middle States	.....	July 1, 23	1,400	1⅜	1½	1⅜	1⅜	— ⅛
1½	1½	1⅝	⅞		4,384,680	....	do ctfs	.....	.....	400	⅞	1	⅞	⅞	0
78½	51⅜	83¼	51	(sh)	3,500,000	N.P.	Pacific Oil	$1.50S.A.	Jan. 20, 26	58,300	54½	54¾	51	51⅜	+ ⅜
83⅞	59⅜	76½	56⅛	$	48,307,400	$50	Pan American P. & T	$1.50Q	Apr. 20, 26	1,300	64	64¼	63¼	64¼	0
84½	60⅛	78⅜	56⅞		91,025,100	50	do B	$1.50Q	Apr. 20, 26	20,400	65	66½	64½	66	+ ⅜
49¾	37¼	46	34	(sh)	400,000	N.P.	Pan American Western B	50cQ	Apr. 30, 26	3,600	38⅞	39½	38	38	— ½
6¼	2¼	10¾	4½	(sh)	198,770	N.P.	Panhandle P. & R	.....	.....	68,500	16½	19¾	14⅝	18¼	+1½
60½	37	90	51	$	2,935,200	$100	do pfd	.....	July 2, 23	300	88	88	87	87	—3
47⅛	36¼	48⅝	40	(sh)	2,406,692	N.P.	Phillips Petroleum	75cQ	Apr. 1, 26	43,000	44⅜	45¼	43½	45	+1¼
3½	1¼	1⅞	¾	$	29,622,925	$25	Pierce Oil Corp	.....	.....	4,600	1	1⅛	⅜	1	0
40	20¼	27⅜	17		15,000,000	100	do pfd	.....	Feb. 1, 22	100	17½	17½	17½	17½	+ ½
8¼	4⅜	7	5⅞	(sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	1,900	4	4	3¾	3¾	— ⅛
32⅝	12½	17½	11	$	11,467,850	$50	Producers & Refiners	.....	Sept. 15, 23	1,100	13	13¼	12	12	—1¼
47⅝	27	35	30¾		2,845,350	50	do pfd	.....	May 1, 25	600	31	31⅞	30¾	31	0
33¾	25⅛	31	25⅜		75,959,250	25	Pure Oil Co	37½cQ	Mar. 1, 26	7,100	27	27	x26½	27	0
108½	103	111¼	106		13,000,000	100	do 8% pfd	$2Q	Apr. 1, 26	100	108	108	107⅛	107⅜	0
57⅜	48¼	57⅜	50	(sh)	691,922	13.40	Royal Dutch, N. Y. shares	$1.339	Jan. 29, 26	2,800	50¾	52⅛	50¾	51⅝	+ ⅜
49	39½	48⅝	41	(sh)	93,345	£2	Shell Transport & T	96½c	Jan. 22, 26	1,800	40¾	42⅞	40¾	42⅝	+1⅜
28⅜	21⅝	28⅜	24	(sh)	10,000,000	N.P.	Shell Union Oil	35cQ	Mar. 31 26	3,700	24½	25	24½	24⅝	+ ⅛
106½	99½	107	103	$	20,000,000	$100	do pfd	$1½Q	May 15, 26	400	105⅜	106⅜	105⅜	106⅜	+ ⅜
28½	17¾	28⅜	18		7,207,620	10	Simms Petroleum	50cS.A.	Jan. 2, 26	20,600	18⅞	19⅜	18⅜	18¾	— ⅛
24⅞	17	24⅞	19⅜	(sh)	4,489,887	N.P.	Sinclair Consolidated	.....	May 31, 24	24,500	20⅞	21¼	20⅜	20¾	0
94⅝	78¾	95	90	$	17,852,200	$100	do pfd	$2Q	May 15, 26	.....	.....	.....	.....	.....	.....
32½	21¾	35⅜	26⅝		23,988,590	25	Skelly Oil Co	50cQ	Mar. 15, 26	53,100	33½	34½	x32⅜	33⅜	+ ⅜
67¾	51½	62¼	52½		237,910,850	25	S. O. California	50cQ	Mar. 15, 26	14,100	54	54	53	54	— ⅜
.....	.....	.....	.....	(sh)	13,016,434	N.P.	S.O. California (new)	.....	.....	4,700	53¾	54	52⅝	54	+ ¼
47½	38⅜	46¾	40¼		515,109,675	25	S. O. New Jersey	25cQ	Mar. 15, 26	35,400	44¾	45	43½	44	— ¾
119	116¾	119	116¾		199,972,900	100	do pfd	$1¾Q	Mar. 15, 26	900	118⅜	119	118¼	118⅞	+ ¾
43⅞	38⅛	41⅝	30⅜	(sh)	1,103,931	N.P.	Sun Oil	25cQ	Mar. 15, 26	300	32½	32½	32½	32½	— ¾
6¾	2	4¾	2¼	(sh)	1,121,368	N.P.	Superior Oil Corp	.....	Dec. 20, 20	1,600	2½	2⅝	2¼	2¼	— ¼
55	42¾	54	48	$	164,450,000	$25	The Texas Co	75cQ	Mar. 31, 26	16,500	51	51	50	50¾	0
23⅜	10⅞	19½	12⅛		8,380,340	10	Texas Pacific Coal & Oil	.....	June 30, 23	4,100	14	14	13¼	13½	— ¼
36⅞	30¼	39¼	30¼	(sh)	2,137,570	N.P.	Tide Water Oil Co	37½c	Mar. 31, 26	600	32	32	31⅛	31⅛	—1⅛
101	99	103	90	$	20,672,900	$100	do 5% pfd	$1.25Q	May 15, 26	200	93¼	93¼	92¼	92¼	— ¾
5⅞	3¼	4¾	3	(sh)	3,742,029	N.P.	Transcontinental Oil	.....	.....	15,600	3⅝	3¾	3⅜	3½	— ¼
43⅜	33	49⅜	37¼	$	40,480,800	$25	Union Oil of California	50cQ	May 10, 26	24,500	43⅝	45¾	42⅝	44½	+1½
134	96¼	94	80		24,423,300	100	Union Tank Car Co	$1½Q	Mar. 1, 26	100	89⅜	89⅜	x89⅜	89⅜	— ⅜
117⅛	113¼	116½	113¾		12,000,000	100	do pfd	$1¾Q	Mar. 1, 26	100	114½	114½	x114½	114½	—1¼
31¾	25½	29¾	25⅛	(sh)	490,000	N.P.	White Eagle Oil & Refining	50cQ	Apr. 20, 26	1,800	26½	27	26¼	26¾	0

*New High †New Low xEx-dividend Total Sales 630,700

Pittsburgh Stock Exchange

1925 High	1925 Low	1926 High	1926 Low	Par Value	Stocks	Transactions Week Ended May 14 Sales	First	High	Low	Last	Ch'ge
.....	.....	6¾	6¾	N.P.	Andes Petroleum	.....	.....	.....	.....	.....	.....
8¼	5¼	7	5¾	$10	Arkansas Nat. Gas	2,370	6¼	6¼	6	6⅛	0
73¼	69¼	.....	.....	N.P.	Columbia Gas	.....	.....	.....	.....	.....	.....
18	14½	17	12½	$10	Devonian Oil	20	13¾	14	13¾	14	+1¼
112¾	105¾	115	112	$100	DuquesneLt.7%pfd.	.....	.....	.....	.....	.....	.....
95	90	.....	.....	100	Fayette County Gas	.....	.....	.....	.....	.....	.....
.....	.....	10	5½	....	HoustonGulfGas(w.i.)	1,400	6¼	6¾	6¼	6½	+ ⅛
.....	.....	33½	30	25	Lone Star Gas Corp.	818	32	32	31¾	31¾	— ¼
37¼	31	36½	33⅛	25	Ohio Fuel Corp.	1,745	33⅞	34	33⅜	33¾	— ⅛
34	26	34	28	25	Oklahoma Nat. Gas.	374	29½	29½	29	29	— ¼
8¾	5	5¾	4¾	5	Pittsburgh O. & G.	.....	.....	.....	.....	.....	.....
9¾	6	10	8	10	Salt Creek Cons.	100	8½	8½	8½	8½	0
13¾	8½	10	8½	10	Tidal Osage	.....	.....	.....	.....	.....	.....

Pittsburgh Curb Market

1925 High	1925 Low	1926 High	1926 Low	Par Value	Stocks	Transactions Week Ended May 14 Sales	First	High	Low	Last	Ch'ge
2¼	.60	3¼	2¼	$ 5	Colombia Synd	.....	.....	.....	.....	.....	.....
.60	.15	15	15	5	Duquesne Oil	.....	.....	.....	.....	.....	.....
9	5½	.....	.....	10	Forest Oil	.....	.....	.....	.....	.....	.....
82¾	64	91½	85	25	Gulf Oil Corp	.....	.....	.....	.....	.....	.....
12½	8¼	12	7½	N.P.	Leonard Oil & Dvlp.	.....	.....	.....	.....	.....	.....
.....	.....	1¾	1¾	N.P.	Mountain & Gulf	.....	.....	.....	.....	.....	.....
2¾	1¾	.....	.....	1	Oklahoma Eastern	.....	.....	.....	.....	.....	.....
.47	.20	.20	.15	10	Omar O. & G	.....	.....	.....	.....	.....	.....
.....	.....	2	1¾	....	Pittsburgh Oil Dev.	.....	.....	.....	.....	.....	.....
27½	25	33	26	10	Plymouth Oil	500	29¾	29¾	29¾	29¾	+ ⅛
7	3	5½	3	5	States Oil	.....	.....	.....	.....	.....	.....
4	1¼	3⅛	2¼	$ 1	Texon Oil & Land	3,960	2⅞	2 11/16	2¾	2¾	— ⅛
11	9	9½	9¼	10	Tidal Osage	.....	.....	.....	.....	.....	.....
.....	.....	42¾	41	N.P.	Waverly Oil Wks. A	.....	.....	.....	.....	.....	.....

*New High ‡New Low xEx Dividend

NEW YORK BONDS

Week Ending May 14

	High	Low	Last	Ch'ge
Amer. Rep. Cor. Deb. 6s	100	99¾	100	0
Associated Oil gold 6s	103	103	103	0
Atlantic Refg. deb 5s	102½	101	102½	+1¼
Barnsdall Corp. 6s	99⅞	99½	99⅝	0
Cal. Petrol sf 6½s	104	103⅜	104	+ ¼
Empire Gas & Fuel 7½s	102	101½	101¾	— ¼
Empire Gas & Fuel 6½s	97¾	97½	97½	0
General Petroleum 5s	100	98¾	99¾	+1
Humble Oil & Refg. 5½s	102⅝	102¼	102⅜	— ⅛
Mid-Cont. Pet. 6½s	104½	103⅛	103⅛	— ⅛
Pan-Amer. P. & T. 7s	105½	105¼	105¼	+ ¼
Pan-Amer. P. & T. 6s	107¼	106⅜	106⅜	— ⅛
Pierce Oil deb 8s	106¼	106	106⅛	— ⅜
Sinclair Con. Oil Col. 7s	96	95¾	95⅞	+ ⅛
Sinclair Con. Oil con. 6½s	91	90⅛	90⅜	— ⅛
Sinclair Con. Oil 6s	107¾	104⅝	105	—2¾
Sinclair Crude Oil 6s	101	100¾	100¾	0
Sinclair Pipe Line sf 5s	90⅞	90½	90¾	+ ⅜
Skelly Oil 6½s	136½	131	136	+2¾
Superior Oil 7s	96	96	96	0
Union Oil of Cal. 5s-C	97½	97	97½	+ ⅜

NEW YORK CURB BONDS

Week Ending May 14

	High	Low	Last	Ch'ge
Atl. Gulf & W I 5s '59	70¾	70	70	0
Cities Service 6s '44	92	91¾	91¾	— ⅛
Cities Service 7s "C" '66	129¾	129½	129½	— ¼
Cities Service 7s "D" '66	104¾	103⅜	104	+ ¾
Galena S O 7s	100	99	99	—3
General Pet. 6s '28	102	101⅜	101⅞	+ ¾
Gulf Oil 5s '37	100½	99⅞	100½	+ ¾
Gulf Oil 5½s '28	101	101	101	0
Independ. Oil 6½s '31	98⅛	97¼	97½	—1⅜
Pan Amer Pet. 6s '40	100¾	100	100	— ½
Pure Oil 6½s '33	103½	103	103	— ½
S O N Y 6½s '33	106⅝	106¼	106¼	+ ¼
Sun Oil 5½s '39	99¾	99½	99¾	0
Tidal Osage 7s '34	104	103½	103½	0
Trans. Cont. Oil 7s '30	93	92	93	0
United Oil Prod. 8s '31	34	34	34	+1⅜
Valvoline 7s	104	104	104	0

Standard Oil Stock Traded in New York Curb Market

1925 High	1925 Low	1926 High	1926 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended May 14 Sales	First	High	Low	Last	Ch'ge
26⅜	17¼	19¾	16⅜	£ 4,000,000	£1	Anglo American	32.4cS.A.	Jan. .4, 26	9,100	16¾	17⅞	16¾	17¾	+1⅜
4¼	1⅜	2¼	1¾	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	.....	.....	.....	.....	.....	.....
12⅜	3	4½	3¼	$ 10,000,000	$10	do pfd	.....	.....	300	3⅛	3⅜	3⅛	3¼	0
240	205	255	226	1,000,000	100	Borne Scrymser	‡84S.A.	Apr. 15, 26	.....	.....	.....	.....	.....	.....
72	53½	59½	53	10,000,000	50	Buckeye Pipe Line	$1Q	Mar. 15, 26	50	53	53	53	53	0
74	48½	73¾	65	3,000,000	25	Chesebrough Mfg	75cQ	Mar. 31, 26	.....	.....	.....	.....	.....	.....
115	110	.....	.....	1,000,000	100	do pfd	$1¾Q	Mar. 31, 26	.....	.....	.....	.....	.....	.....
31½	21⅞	25⅞	19½	34,914,280	10	Continental Oil	25cQ	Mar.'15, 26	7,200	20⅞	21⅜	x20¾	20¾	+ ¼
17½	10	16	13½	1,500,000	25	Crescent Pipe Line	.....	Sept. 15, 23	100	14	14	14	14	— ¼
150	132	137	110	3,000,000	100	Cumberland Pipe Line	$3Q	Mar. 15, 26	10	112	112	112	112	—3
96	61	68¾	47¾	5,000,000	100	Eureka Pipe Line	$1Q	May 1, 26	100	49½	49½	49½	49½	+2½
68½	23½	32½	17¼	16,000,000	100	Galena Signal Oil	.....	June 30, 25	495	20¼	20¼	17¼	18	+2⅛
105	88	94½	78	4,000,000	100	do new pfd	$2Q	Mar. 31, 26	230	81	86	80	80	+5
114	93	97½	75	2,000,000	100	do old pfd	$2Q	Mar. 31, 26	610	83	86	75	78⅛	+8⅛
95	42¼	99⅝	52	43,750,000	25	Humble Oil & Refining	30cQ	Apr. 1, 26	14,400	63⅛	65	62¼	64	+ ¾
.....	.....	68⅜	53½	72,916,667	25	do new w. i	.....	.....	2,900	63¾	64½	62⅛	63½	+ ⅜
154½	127	144½	134¼	20,000,000	100	Illinois Pipe Line	$6S.A.	Dec. 31, 25	90	143¾	144	143	143	+1
39¼	27¼	38¾	31½	(sh) 6,491,852	N.P.	Imperial of Canada (new)	25cQ	Mar. 1, 26	12,400	35	36⅛	34⅝	35⅝	+ ⅛
84	57⅝	70	58	$ 5,000,000	50	Indiana Pipe Line	$1Q	May 15, 26	100	64	64	64	64	0
35⅜	22⅜	35½	28¾	(sh) 7,118,138	N.P.	International Petroleum	25c	Feb. 15, 26	26,800	32⅜	33⅛	31½	31¾	+ ⅝
25⅝	16½	20⅝	15¾	$ 6,362,500	$12½	National Transit	25cS.A.	Dec. 15, 25	300	15⅞	15⅞	15⅝	15⅝	+ ⅛
79	49¾	51½	39	5,000,000	100	New York Transit	$1Q	Apr. 15, 26	50	46	46	46	46	+ ½
88	67½	80½	70¾	4,000,000	100	Northern Pipe Line	$3S.A.	Jan. 1, 26	.....	.....	.....	.....	.....	.....
75¼	60¼	67⅜	59	60,000,000	25	Ohio Oil Co	50cQ	Mar. 31, 26	1,000	59	60	59	59	— ⅛
44½	19	23	15	10,000,000	25	Penn Mex Fuel	50c	May 21, 25	100	18	18	18	18	— ⅛
65½	45⅞	60¼	48	60,000,000	25	Prairie Oil & Gas	.....	July 31, 25	6,500	54½	55¾	x58¾	54⅞	— ⅛
129¾	106	127½	122½	81,000,000	100	Prairie Pipe Line	$2Q	Apr. 30, 26	750	123¾	124	123¼	124	+ ½
254	200	212	191	4,000,000	100	Solar Refining Co	$5S.A.	Dec. 19, 25	20	198	198	198	198	0
108	63	74½	61½	10,000,000	100	Southern Pipe Line Co	$1Q	Mar. 1, 26	500	67	67½	67	67	0
197	139	197	152	20,000,000	100	South Penn Oil Co	$1.50Q	Mar. 31, 26	90	152	152*	152	152	+4
47½	45	50	37¾	20,000,000	25	do new	.....	.....	200	37¾	38⅛	37¾	38⅛	+ ⅛
84	50	56	51⅝	3,500,000	100	South West Pa. Pipe Line	$1Q	Apr. 1, 26	200	52⅛	52⅛	52⅛	52⅛	+ ½
.....	.....	58¾	51½	(sh) 12,602,434	N.P.	S. O. California (new)	.....	.....	5,100	54	54½	53⅜	53⅜	+ ⅝
70¾	59½	70½	61¼	$ 223,756,258	$25	S. O. Indiana	62½cQ	Mar. 15, 26	19,800	64⅛	64⅞	63¼	64	— ⅛
46	30⅛	36½	25	8,000,000	25	S. O. Kansas	.....	June 16, 24	1,300	27⅛	27½	26¾	26¾	— ¾
137	114¾	134⅜	108	16,864,434	25	S. O. Kentucky	$1Q	Mar. 1, 26	400	117	118	117	117	—1
270	231	275	206	4,500,000	100	S. O. Nebraska	$5S.A.	Dec. 19, 25	190	271	275	271	271	—3
48⅝	40¼	47¼	30⅜	227,535,300	25	S. O. New York	35cQ	Mar. 15, 26	11,714	31¼	31¾	x31	31½	+ ⅛
369	338	362	302½	14,000,000	100	S. O. Ohio	$2½Q	Apr. 1, 26	20	310	311	310	310	+1
123	116	120	117	7,000,000	100	do pfd	$1¾Q	Mar. 1, 26	90	118½	120	118½	120	0
27	12	23	15½	1,722,931	25	Swan-Finch Co	.....	Nov. 1, 19	100	17	17	17	17	0
109½	80⅛	112	95¾	61,919,950	25	Vacuum Oil Co	50cQ	Mar. 20, 26	3,100	98¾	99	97⅜	98½	+ ⅛

Borne Scrymser $2 extra April 15 $4 extra Oct. 15 $4 extra April 15 ‡Vacuum 50c extra Mar. 20, June 20, Sept. 19 Dec. 19 Dec 19 special $1 Dec 19 S.O Neb. $10 extra Dec. 1 special $1 Dec. 19 S. O Neb. $10 extra Dec. 19 Ohio Oil 50c extra Dec. 31. Chesebrough 62½c extra Dec. 29. Buckeye P. L. 59c extra Mar. 15. National Transit 50 extra Mar. 15. Indiana P. L. $1 May 15.

New York Curb Market

1925 High	1925 Low	1926 High	1926 Low	Par Value	Stocks	Transactions week ended May 14 Sales	First	High	Low	Last	Ch'ge
11½	2½	14½	5	....	Amer. Maracaibo	20,200	6¾	7¾	6½	6¾	+ ⅛
8⅜	5	6¾	5⅞	$10	Arkansas Natural Gas	300	6	6⅛	6	6	+ ⅛
.....	.....	19¼	14⅜	N.P.	Beacon Oil	1,100	14⅛	14⅝	14¼	14⅝	+ ⅛
47½	38	.....	.....	$25	British-American	.....	.....	.....	.....	.....	.....
10¼	2¾	22⅞	9¼	25c	Carib. Syndicate	9,800	12¾	13⅝	12⅛	12¾	+ ¼
43	35	42⅝	37½	$20	Cities Service	10,600	41⅛	41⅛	x40½	40¾	— ⅛
85⅝	80½	85⅝	82¾	100	do preferred	2,400	84¾	*85⅛	x84¾	85	+ ¼
8	7¼	7½	7⅜	10	do preferred B	200	7½	7½	x 7⅜	7⅜	— ⅛
21⅜	17½	20⅜	19	10	do bankers' sh	.....	.....	.....	.....	.....	.....
2¾	.60	3½	2	N.P.	Colombia Syndicate	14,000	2 1/16	2 1/16	2 1/16	2 1/16	— 1/16
15	8¼	13¼	10	N.P.	Creole Syndicate	4,300	11¼	11¾	10½	11¾	+1¼
12¼	5	7⅜	1⅝	N.P.	Crown Central	1,700	2¼	2¼	2	2	+ ⅛
7	2	3¾	2	N.P.	Derby Oil & Refining	300	3	3	3	3	0
27	10½	17½	13	N.P.	do preferred	1,400	15½	15½	15	15	— ½
6	1⅜	7½	3⅞	N.P.	Gibson Oil	194,100	6½	* 7½	† 3⅞	6	+ ½
3¾	1⅛	2	.65	N.P.	Gilliland v. t. c	.....	.....	.....	.....	.....	.....
98¼	63½	93¾	82	$25	Gulf Oil Corp	2,600	84⅛	85	84	84½	— ½
5⅞	2¼	4	2¼	N.P.	Kirby Petroleum	600	2¼	2¼	2¼	2¼	0
23¼	17⅞	25⅞	16½	N.P.	Lago Oil & Trans. A	33,030	18¼	19½	18	19	+ ⅞
11¾	4⅛	13	8½	N.P.	Lago Petroleum	.....	.....	.....	.....	.....	.....
13	6	12¼	5¾	N.P.	Leonard Oil & Dev	7,500	9¼	9¼	8⅜	8¾	+ ½
25⅞	18	25¾	20¼	N.P.	Lion Oil Refining	1,500	21¼	21¾	†20¼	20½	—1
4¼	1¾	2¾	2¼	N.P.	Marland of Mexico	.....	.....	.....	.....	.....	.....
5¾	.56	5½	3¾	$10	Mexican-Panuco	6,400	4	4½	4	4½	+ ⅛
2	1	1¾	1¼	1	Mountain & Gulf	2,400	1¾	1¾	1⅝	1⅝	0
26¼	18⅜	26	23	10	Mountain Prod	3,800	24¾	25⅛	24¼	24¼	— ⅝
6¾	3⅝	6¾	5⅞	5	New Bradford	700	6¼	6¼	6⅛	6⅛	— ⅛
24¾	16¼	5½	2	10	New England Fuel	.....	.....	.....	.....	.....	.....
19⅜	6¼	17	9⅜	1	New Mexico & Ariz	1,100	10½	11	10	10½	— ½
12½	8¼	17	8	$5	New York Oil	200	12⅜	12⅜	12⅜	12⅜	+1⅜
37	14	36	34¼	$5	Ohio Fuel Corp	.....	.....	.....	.....	.....	.....
2½	.90	2¾	.70	N.P.	Peer Oil Corp	2,600	75	75	70	70	—5
28¼	16	22¾	18½	$10	Pennok Oil	700	19⅝	20	19⅝	19⅝	— ¼
44½	16	29⅝	14⅝	25	Red Bank Oil	600	28	29	25⅞	28	— ½
33½	19	24⅞	14½	N.P.	Reiter-Foster	1,200	20½	21½	20½	21¼	+ ⅝
9½	3½	7½	4⅝	N.P.	Ryan Consolidated	800	5¼	5½	5	5	+ ¼
9¾	6⅝	10	8	$10	Salt Creek Cons	900	8½	8¾	8½	8¾	+ ¼
35	24	36	28⅞	10	Salt Creek Prod	4,200	30¾	31⅜	30⅛	30⅜	— ⅝
3⅞	1	2¾	1⅝	5	Savoy Oil	100	2⅝	2⅝	2⅝	2⅝	— ⅝
13¾	9	10	7⅝	10	Tidal Osage	.....	.....	.....	.....	.....	.....
10⅞	8	10	8¼	10	do non-voting	300	8¼	8¼	† 8¼	8¼	— ¼
.....	.....	27	21	N.P.	Tide Water Associated	7,300	23½	24	23	23⅜	+ ⅜
.....	.....	99¼	97½	100	Tide Water Associated preferred	1,800	97⅝	97⅝	97½	97½	0
4⅞	1¾	8	4¼	5	Venezuelan Pet	42,300	5⅝	6⅞	5⅝	6⅞	+1
.....	.....	29⅜	23½	....	Warner-Quinlan w. i	600	26¼	26¼	25½	25½	— ¾
31¼	22⅜	27¼	22	N.P.	Wilcox Oil & Gas new	100	24¼	24¼	24¼	24¼	— ¾
7	3⅞	6⅝	5¼	N.P.	Woodley Petroleum	200	5⅜	5½	5⅜	5½	0

*New High †New Low xEx-dividend

Amerada Nets $1.14 Per Share First Quarter

NEW YORK, May 15,—Armerada Corp. reports net income of $811,628 for the first quarter of 1926, after setting aside $618,675 for depreciation, depletion and federal taxes and after payment of all expenses. This is equivalent to $1.14 a share on the 713,300 outstanding no par shares. The report shows that the company has no funded debt. Its common shares, formerly of $10 par value, are now of no par value.

According to President E. L. DeGolyer, conditions in the oil industry are sounder than at any previous time in six years. Speaking of his own company, he said that "prospects for the second quarter are for much higher earning than in the first quarter."

The Consolidated statement for the first quarter of Amerada Corp. and subsidiaries follows:

Gross oper. Income	$2,305,761.43
Operating costs, etc.	916,456.52
Operating income	$1,389.304.91
Other income	40,997.28
Total income	$1,430,302.19
Deprec., depl. and fed. taxes	618,674.66
Net income	$ 811,627.53

Sinclair Pipe Line Co. Pays Dividend

CLEVELAND, MAY 17,—Sinclair Pipe Line Co. for 1925 reports net profits of $2,864,866, equivalent to $10.20 per $100 share, compared with $8.91 per share in 1924. The company paid its owners, the Standard Oil Co. of Indiana and Sinclair Consolidated Oil Corp., $1,965,908 or 7 per cent dividends last year. No dividend was paid in 1924.

On the combined capital, stock, bonded capital and surplus the pipe line company last year netted only 4.84 per cent. Income accounts compare:

	1925	1924
Operating revenue	$16,368,786	$14,017,661
Expenses, etc.	6,130,345	5,731,858
Operating income	$10,238,441	$ 8,285,803
Other income	199,899	106,683
Total income	$10,438,340	$ 8,392,486
Depreciation	5,623,386	4,608,624
Interest, tax, etc.	1,950,088	1,280,543
Net income	$ 2,864,866	$ 2,503,319
Dividends	1,965,908	
Surplus	$ 898,958	$ 2,503,319

Balance sheets as of Dec. 31 compare:

ASSETS	1925	1924
Real estate plant	$76,129,479	$75,657,588
Specific funds	756,966	465,366
Cash	838,119	1,473,177
Acc'ts. receivable	1,412,705	1,377,268
Inventories	3,255,678	3,249,011
Deferred charges	1,654,986	2,084,322
Total	$84,047,933	$84,306,732
LIABILITIES		
Capital stock	$28,084,400	$28,084,400
Funded debt.	23,503,000	24,495,000
Depreciation & amortization	22,329,754	17,162,155
Insurance, etc.	942,772	675,569
Notes payable		5,500,000
Acc'ts payable	467,198	597,646
Accrued interest, taxes, etc.	1,119,729	1,113,147
Deferred credits	2,845	
Surplus	7,598,235	6,678,815
Total	$84,047,933	$84,306,732

THE OIL INDUSTRY EXCHANGE

Positions Wanted

Refinery Superintendent. At present employed, wishes to make change. Considerable experience with high and low pressure cracking processes, vacuum and all types tube and continuous stills, and asphalt refining. Will go anywhere. Box 598.

Specialist in all grades Greases, Soluble Oils, Castors, Non-Chatter Bases, Soaps and General Compounding, desires new connection. Box 529.

Advertising Man Available. Past 5 years assistant advertising manager large oil company of Standard group. A good man to invest in—his stock is going up! Good references from present or past employers. Box 606.

Position Wanted. Superintending Installation Oil Stations, experienced graduate engineer, Chief of Topographical Survey Field Party for steamshovel job; knowledge earthwork, concrete, piping, tanks, structural steel, power plants; safety from explosion, anti-tobacco. Box 605. Care this publication.

District or Division Manager Available. Ten years executive experience in direction and supervision of bulk and service station sales and operation. Strong personality. Good leader. Clean record. Excellent references. Box 603.

Lube and Light Oil Man familiar with industrial, dealer, jobber-distributor sales, organization, distribution. Desires supervisory position. Or would make direct connection with manufacturer selling above. Ohio, Penna., New York. Box 607.

Situations Open

We need an active young man with tact and resourcefulness who knows the Oil Trade, to visit them on our behalf. Engineering education an assistance but not necessity. National Petroleum Mutual Fire Insurance Co., 708 South Washington Square, Philadelphia, Pa.

Large Pipe Line Company desires employ civil or mechanical engineering graduate with three or four years' practical experience, not necessarily in oil business. Position offers opportunity learn pipe line business and work into management of operation and construction. Will pay right man good salary. State age, education, experience, and references, in detail.

Box 604

Miscellaneous

WHAT IT COSTS

For "Position Wanted" advertisements—5 cents per word. Minimum cost $1.00. All other classified advertising—10 cents per word. Minimum cost $3.00. Advertisements set in special type or with border—$4.00 per column inch. Copy must reach us not later than Friday preceding date of issue.

All advertisements carried on this page are payable in advance.

For Sale

50 Sharpes No. 6 Super-Centrifuges For Sale

30 have never seen any service. Motor driven; in first class condition; at less than half of the original cost.

Acme Oil Corporation
189 No. Clark St.
Chicago, Ill.

Bulk and Service Station For Sale. Located in northern Iowa. Leading station in town of ten thousand, all equipment of latest and best. Box 601.

Wholesale and Retail Gasoline and Oil Business For Sale

Located in Eastern Ohio City. Excellent buy; will require $25,000 cash to swing deal. Owners have good reason for selling.

Box 602
Care of National Petroleum News

These Savings Will Increase Your Working Capital

—Savings made by selling tanks, pumps, engines, etc. which you have replaced with new equipment.

Clean out your store room and yards — don't have your money tied up in equipment that you are not using.

One well known company wanted to dispose of some tanks and in writing to us to discontinue their advertisement said,

"We have had a great many replies from this ad and are satisfied that it is an excellent medium for the disposal of surplus material."

You can get the same results.

Advertisers having box numbers should be addressed in care of National Petroleum News, 817 Huron road, Cleveland, Ohio, unless otherwise specified.

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